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Tennessee

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This document has been produced in compliance with Section 110(h)(1) of the Clean Air Act amendments of 1977. The Federally enforceable regulations contained in the State Implementation Plans (SIPs) have been compiled for all 56 States and territories (with the exception of the Northern Mariana Islands). They consist of both the Federally approved State and/or local air quality regulations as indicated in the Federal Register and the Federally promulgated regulations for the State, as indicated in the Federal Register. Regulations which fall into one of the above categories as of January 1, 1978, have been incorporated. As mandated by Congress, this document will be updated annually. State and/or local air quality regulations which have not been Federally approved as of January 1, 1978, are not included here; omission of these regulations from this document in no way affects the ability of the respective Federal, State, or local agencies to enforce such regulations.

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Air Pollution Regulations in State Implementation Plans:

Tennessee

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U.S. ENVIRONMENTAL PROTECTION AGENCY
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Publication No. EPA-450/3-78-092

INTRODUCTION

This document has been produced in compliance with Section 110(h)(1) of the Clean Air Act Amendments of 1977. The Federally enforceable regulations contained in the State Implementation Plans (SIPs) have been compiled for all 56 States and territories (with the exception of the Northern Mariana Islands). They consist of both the Federally approved State and/or local air quality regulations as indicated in the Federal Register and the Federally promulgated regulations for the State, as indicated in the Federal Register. Regulations which fall into one of the above categories as of January 1, 1978, have been incorporated. As mandated by Congress, this document will be updated annually. State and/or local air quality regulations which have not been Federally approved as of January 1, 1978, are not included here; omission of these regulations from this document in no way affects the ability of the respective Federal, State, or local agencies to enforce such regulations.

There have been recent changes in the Federal enforceability of parking management regulations and indirect source regulations. The October, 1977, appropriation bill for EPA prohibited Federal enforcement of parking management regulations in the absence of specific Federal authorizing legislation. Federally promulgated parking management regulations have, therefore, been suspended indefinitely. Pursuant to the 1977 Clean Air Act Amendments, indirect source regulations may not be required for the approval of a given SIP. Consequently, any State adopted indirect source regulations may be suspended or revoked; State adopted indirect source regulations contained in an applicable SIP are Federally enforceable. More importantly, EPA may only promulgate indirect source review regulations which are specific to Federally funded, operated, or owned facilities or projects. Therefore, the Federally promulgated indirect source regulations appearing in this document are not enforceable by EPA except as they relate to Federal facilities.

Since State air quality regulations vary widely in their organization, content, and language, a standardized subject index is utilized in this document. Index listings consist of both contaminant and activity oriented categories to facilitate usage. For example, for regulations which apply to copper smelters, one might look under sulfur compounds (50.2), particulate matter process weight (50.1.1), or copper smelters (51.15). Federal regulations pertaining to a given State immediately follow the approved State and local regulations.

Additionally, a summary sheet of the information included in each comprehensive document is presented prior to the regulatory text to allow one to quickly assess the contents of the document. Specifically, the summary sheets contain the date of submittal to EPA of each revision to the SIP and the date of the Federal Register in which the revision was either approved or disapproved by EPA. Finally, a brief description or reference of the regulation which was submitted is also included.

This document is not intended to provide a tool for determining the enforceability of any given regulation. As stated above, it is intended to provide a comprehensive compilation of those regulations which are incorporated directly or by reference into Title 40, Part 52, of the Code of Federal Regulations. Consequently, the exclusion of a Federally approved regulation from this document does not diminish the enforceability of the regulation. Similarly, the inclusion of a given regulation (for example, regulations governing pollutants, such as odors, for which there is no national ambient air quality standards) in this document does not, in itself, render the regulation enforceable.

SUMMARY SHEET

OF

EPA-APPROVED REGULATION CHANGES

TENNESSEE

Submittal	Approval	Description
4/27/72	5/31/72	Chapter 3 - City of Memphis
8/17/72	10/28/72	Regs. of Memphis-Shelby Co., Knoxville-Knox Co.
2/16/73	7/24/74	State New Source Performance STDs.
6/8/73	7/24/74	State Chapter II—IV VI--XIII
7/18/73	3/13/74	Hamilton Co. Regs. Note: Rule 15216 disapproved.
8/13/73	3/13/74	Metro Code Nashville-Davidson Co., Chapter IV Note: No action on 4-1-3 Old reg. previously approved remains in effect.
10/12/73	8/8/74	State Chapter II, VI, VII, IX, XIV, Note: disapproved for Roane and Humphreys Co. for Fuel Burn Eq. of 1,000 million BTU per hour or more. The original approved Regs. remain in affect for these 2 Counties.
4/30/76	2/25/77	State Chapter 1200-3-14. Note: replaces old Chapter XIV.

FEDERAL REGULATIONS

Section No.	Description
52.2223	Compliance Schedule.
52.2228	Review of New or Modified Indirect Sources.
52.2232	Prevention of Significant Deterioration.

DOCUMENTATION OF CURRENT EPA-APPROVED STATE AIR POLLUTION REGULATIONS

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- 2.0 GENERAL PROVISIONS AND ADMINISTRATIVE PROCEDURES
- 3.0 REGISTRATION CERTIFICATES, OPERATING PERMITS AND APPLICATIONS
- 4.0 AIR QUALITY STANDARDS (PRIMARY AND SECONDARY)
  - 4.1 PARTICULATES
  - 4.2 SULFUR DIOXIDE
  - 4.3 NITRIC OXIDES
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CHAPTER I

(2.0)

GENERAL PROVISIONS

These regulations are intended to implement provisions of the "Tennessee Air Quality Act" (Tennessee Code Annotated Section 53-3408 et seq.).

These regulations are based upon the premise that the basic and foremost function of the air is to sustain life and that air in its purest state is best suited for this need. It is intended that these regulations assist in maintaining an equitable balance between benefits of clean air and the economic cost of achieving clean air. More specifically, it is intended that these regulations define ambient air quality standards to be achieved and maintained and to provide for an orderly and equitable regulation of air quality by limiting emissions of air contaminants.

The ambient air is the air surrounding us. Ambient air quality standards determine the level of air quality in which we will live, and should be used as tools in achieving cleaner air, not as a permit to unnecessarily degrade air quality. Polluted air can be a menace to all forms of life and therefore, the disposal of wastes into the atmosphere must be controlled.

Ambient air quality standards are further intended to promote the maximum use of property. When the problems involved are esthetic in nature, an equitable economic balance must be achieved. When a health hazard is involved, there can be no compromise.

The requirements for limiting airborne contaminants must relate effects on men, animals, vegetation, and property to pollutant concentration at the point of contact. This, in turn, must be correlated with the source or sources. When multiple sources of a pollutant exist in an area, a limitation of the emission from each source must be exercised and the individual contribution to the total pollutant load in the area must be reduced to insure compliance with the ambient air quality standards. This is accomplished by the application of emission standards.

An emission standard is a limit on the amount of air contaminant emitted from a source, and is intended to bring the ambient air within acceptable air quality limits.

These standards will be modified from time to time, as additional information on air contaminants and sources of air pollution are developed and evaluated.

CHAPTER II

(1.0)

DEFINITIONS

The following terms shall, unless the context clearly indicates otherwise, have the following meaning:

1. Air Contaminant is particulate matter, dust, fumes, gas, mist, smoke or vapor, or any combination thereof.

2. Air Contaminant Source is any and all sources of emission of air contaminants, whether privately or publicly owned or operated. Without limiting the generality of the foregoing, this term includes all types of business, commercial and industrial plants, works, shops, and stores, and heating and power plants and stations, building and other structures of all types, including multiple family residences, apartment houses, office buildings, hotels, restaurants, schools, hospitals, churches and other institutional buildings, automobiles, trucks, tractors, buses and other motor vehicles, garages and vending and service locations and stations, railroad locomotives, ships, boats and other water borne craft, portable fuel-burning equipment, incinerators of all types, indoor and outdoor, refuse dumps and piles, and all stack and other chimney outlets from any of the foregoing; provided, however, that neither automobiles, trucks, tractors, buses or other motor vehicles powered by any fuel other than diesel oil and which were manufactured prior to September 1, 1967, automobiles, trucks, tractors, buses or other motor vehicles powered by diesel oil and manufactured prior to January 1, 1970, nor automobiles, trucks, tractors, buses or other motor vehicles which are equipped to comply and do comply with the Federal "Motor Vehicle Air Pollution Control Act" shall be considered or determined to be an "air contaminant source.

3. Air Curtain Destructor is a unit consisting of a combustion chamber pit and an air blower designed to establish a curtain of high velocity air above the fire burning in the pit so that the products of combustion must be forced up through the curtain before they can reach the outside air.

4. Air Pollution is presence in the outdoor atmosphere of one or more air contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant or animal life or to property, or which unreasonably interfere with the equipment of life and property.

5. Ambient Air is that portion of the atmosphere, external to buildings.

6. Board is the Air Pollution Control Board of the State of Tennessee.

7. Continuous Monitoring is sampling and analysis of air contaminants in a continuous or timed sequence, using techniques which will adequately reflect actual emission levels or ambient concentrations on a continuous basis.

8. Cupola is a stack type furnace in which fuel, metal and fluxing agents are intermixed and is used for producing molten metal. It consists primarily of, but is not limited to, furnace proper, tuyeres, fans or blowers, tapping ports, charging equipment, gas cleaning devices and other auxiliary equipment. Cupolas are further categorized for the purpose of these regulations as follows:

a. Ferrous - a cupola in which the major component of the metal is produced is iron.

b. Jobbing - a cupola used in an intermittent type operation where the process weight is not in excess of 20,000 pounds per hour and the operating (firing) time is not in excess of 8 hours per day.

c. Existing - a cupola placed in operation at its present location prior to April 3, 1972.

9. Department is the Department of Public Health of the State of Tennessee.

10. Effluent Water Separator is any tank, box, sump, or other container in which any volatile organic compound floating on or entrained or contained in water entering such tank, box, sump, or other container is physically separated and removed from such water prior to outfall, drainage, or recovery of such water.

11. Emission is the release of material to the ambient air.

12. Equivalent Method is any method of monitoring, sampling and analyzing for an air contaminant which can be demonstrated to the Technical Secretary's satisfaction to have a consistent relationship to the reference method.

13. Fuel Burning Equipment is any equipment, device or contrivance and all appurtenances thereto, in which fuel is burned for the primary purpose of producing thermal energy and in which the material being heated is not contacted by, and adds no substance to, the products of combustion.

14. Fuel Burning Installation consists of one or more units of fuel-burning equipment where the products of combustion are discharged through a single stack or where the products of combustion are discharged through more than one stack the plumes from which tend to merge into a single plume.

15. Fugitive Dust is any visible emission, other than water droplets, issuing from any source other than through a stack.

16. Garbage is putrescible animal or vegetable waste.

17. Hazardous Air Contaminant is any air contaminant which may cause, or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness and has been so designated by the Technical Secretary.

18. Incinerator is any equipment, device, or contrivance used for disposal of waste or refuse by burning, excluding wigwam burners and air curtain destructors.

19. Kraft Mill is any pulping process which uses, for a cooking liquor, an alkaline sulfide solution containing sodium hydroxide and sodium sulfide.

20. Modification is any physical change in, or change in the method of operation of an air contaminant source which increases the amount of any air contaminant emitted by such source or which results in the emission of any air contaminant not previously emitted, except that:

a. routine maintenance, repair, and replacement shall not be considered physical changes, and

b. the following shall not be considered a change in the method of operation:

    1. an increase in the production rate, if such increase does not exceed the operating design capacity of the affected source;

    2. an increase in the hours of operation; and

    3. the use of an alternate fuel if the source is designed to accommodate such alternate fule;

provided, however, that the Technical Secretary is notified within thirty (30) days of such changes.

21. New Source is any air contaminant source constructed after April 3, 1972, and any air contaminant source constructed prior to that date to which any modification is made after that date.

22. New Source Performance Standard is a standard for the emission of an air contaminant promulgated by the Administrator of the Environmental Protection Agency and published in the Federal Register.

23. Nitric Acid Plant is any air contaminant source producing nitric acid.

24. Opacity is that property of a substance tending to obscure vision and is measured in terms of percent obscuration. As used in these regulations it does not include opscuration of vision due to uncombined water droplets. The percentage opacity of a plume is numerically equal to twenty (20) times the Ringelmann number for a plume of black smoke having equivalent capacity of obscuration.

25. Open Burning is the burning of any matter under such conditions that the products of combustion are emitted directly into the open atmosphere without passing directly through a stack except when equipment is provided and used to control fuel-air ratio.

26. Particulate Matter is any material, except uncombined water, that exists in a finely divided form as a liquid or solid.

27. Parts Per Billion (ppb) is a term describing parts of an air contaminant per billion parts of gas by volume (1 ppm equals 0.0001 percent by volume).

28. Parts Per Million (ppm) is a term describing parts of an air contaminant per million parts of gas by volume (1 ppm equals 0.0001 percent by volume).

29. Person is any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, political subdivision, or any other legal entity, or their legal representative, agent or assigns.

30. Point Source shall have the same meaning as defined in Part 51 of Title 40 of the Code of Federal Regulations.

31. Political Subdivision is any municipality, city, incorporated town, county, district or authority, or any portion or combination of two or more thereof.

32. Portland Cement Plant is any air contaminant source manufacturing portland cement by either the wet or dry process.

33. Process Emission is any emission of an air contaminant to the ambient air other than that from fuel burning equipment, incinerator, wigwam burners, or open burning.

34. Process Emission Source is one or more units of processing equipment which may be operated independently of other parts of the operations at any given manufacturing or processing facility; also, where it is common practice to group more than one unit of like or similar processing equipment together and to apply a single or combined unit of air pollution control equipment to the emissions of the entire group, such group of units shall be constructed as a process emission source.

35. Process Weight means the total weight of all materials introduced into any specific process that may cause any emission of particulate matter. Solid fuels charged are considered as part of the process weight, but liquid and gaseous fuels and combustion air are not.

36. Process Weight Rate is a rate established as follows:

a. For continuous or long-run, steady-state, operations, it is the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the numbers of hours of such period or portion thereof.

b. For cyclical or batch source operations, it is the total proess weight for a period which covers a complete or an integral number of cycles, divided by the hours of actual process operation during such period.

c. Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this definition, that interpretation which results in the minimum value for allowable emissions shall apply.

37. Reference Method is a method of monitoring, sampling and analyzing for an air contaminant as described in Chapter XII of these Regulations.

38. Ringelmann Chart is the chart published and described in U.S. Bureau of Mines Information Circular 8333.

39. Salvage Operation is any business, trade or industry engaged in whole or in part, in reclaiming one or more terms of value.

40. Smoke is small gas-borne particles resulting from incomplete combustion, consisting predominantly, but not exclusively, of carbon and other combustible material. It does not include water vapor or water droplets.

CHAPTER III

(4.0) AMBIENT AIR QUALITY STANDARDS

(2.0) SECTION 1 -- APPLICABILITY

Ambient air quality standards as given in Tables I, II and III are applicable throughout Tennessee.

These ambient air quality standards shall not be construed, applied or interpreted to allow any significant deterioration of the existing air quality in any portion of the state.

(1.0) SECTION 2 -- DEFINITIONS

Primary ambient air quality standards define levels of air quality believed adequate, with an appropriate margin of safety, to protect the public health.

Secondary ambient air quality standards define levels of air quality believed adequate, with an appropriate margin of safety, to protect the public welfare from any known anticipated adverse effects of the pollutant.

(4.0) SECTION 3 -- STANDARDS

TABLE I

TENNESSEE AMBIENT AIR QUALITY STANDARDS for Suspended Particulates, Sulfur Dioxide, Carbon Monoxide, Photochemical Oxidants, Non-Methane Hydrocarbons and Nitrogen Dioxide.

Contaminant	Primary Standard			Secondary Standard		
	Concentration		Averaging Interval	Concentration		Averaging Interval
	ug/m^3	ppm by vol.		ug/m^3	ppm by vol.	
Suspended Particulates	75	--	AGM	60	--	AGM
	260	--	24 Hr.	150	--	24 Hr.
Sulfur Dioxide	80	0.03	AAM	60	0.02	AAM
	365	0.14	24 Hr.	360	0.138	24 Hr.
				1300	0.5	3 Hr.
Carbon Monoxide	10,000	9.0	8 Hr.	10,000	9.0	8 Hr.
	40,000	35.0	1 Hr.	40,000	35.0	1 Hr.
Photo chemical Oxidant	160	0.08	1 Hr.	160	0.08	1 Hr.
Hydrocarbons (non-methane)	160	0.24	3 Hr. a.m.	160	0.24	3 Hr. a.m.
Nitrogen Dioxide	100	0.05	AAM	100	0.05	AAM

Notes:
1. All values other than annual values are maximum concentrations not to be exceeded more than once per year.
2. PPM values are approximate only.

3. All concentrations relate to air at standard conditions of 25° C temperature and 760 millimeters of mercury pressure.

4. $\mu g/m^3$ - micrograms per cubic meter

5. AGM - Annual geometric mean

6. AAM - Annual arithmetic mean

TABLE II

Tennessee Ambient Air Quality Standards for Soiling Index in COH units per 1000 linear feet of air.

Primary Standards		Secondary Standards	
Soiling Index	Averaging Interval	Soiling Index	Averaging Interval
1.0	24 hr. average	0.6	24 hr. average
3.5	2 hr. average	2.0	2 hr. average

Note: All values are maximums not to be exceeded more than once per year.

TABLE III

Tennessee Ambient Air Quality Standards for Gaseous Fluorides Expressed as HF.

Primary Standards			Secondary Standards		
Concentration		Averaging Interval	Concentration		Averaging Interval
$\mu g/m^3$	ppb by vol.		$\mu g/m^3$	ppb by vol.	
1.2	1.5	30 days	1.2	1.5	30 days
1.6	2.0	7 days	1.6	2.0	7 days
2.9	3.5	24 hr.	2.9	3.5	24 hr.
3.7	4.5	12 hr.	3.7	4.5	12 hr.

Notes: 1. All values are maximums not to be exceeded more than once per year.

2. Concentrations in micrograms per cubic meter ($\mu g/m^3$) are approximate only.

3. All concentrations relate to air at standard conditions of 25° C temperature and 760 millimeters of mercury pressure.

(2.0) SECTION 4 -- The standards set forth in this chapter shall be achieved by July 1, 1975.

CHAPTER IV

(51.13) OPEN BURNING

(2.0) SECTION 1 -- PURPOSE

It is the purpose of this Chapter to establish controls on open burning so as to prevent undesirable levels of air contaminants in the atmosphere.

(51.13) SECTION 2 -- OPEN BURNING PROHIBITED

No person shall cause, suffer, allow or permit open burning except as specifically permitted in this Chapter.

(2.0) SECTION 3 -- EXCEPTIONS TO PROHIBITION

A. Open burning as listed below may be conducted without permit subject to the specified limitations and provided further that no public nuisance is or will be created by such open burning. This grant of exemption shall in no way relieve the person responsible for such burning from the consequences of or the damages, injuries or claims resulting from such burning.

1. Domestic burning, exclusive of garbage, at a property consisting of not more than four (4) dwelling units and used exclusively as private residences where collection services for such material is not available. Collection service will be considered available if provided as a public service or if such may be obtained at a reasonable cost other than as a public service.

2. Fires used for cooking of food or for ceremonial or recreational purposes including barbecues and outdoor fireplaces.

3. Fires used to clear land of materials grown on that land for agricultural, forest or game management purposes provided no land, air, or water traffic hazard is created.

4. Fires set for the training and instruction of public or private fire-fighting personnel including those in Civil Defense.

5. Fires set by or at the direction of responsible fire control agency for the prevention, elimination or reduction of a fire hazard.

6. Smokeless flares or safety flares for the combustion of waste gases, providing other remaining applicable conditions of these regulations are met.

B. All other forms of open burning are hereby prohibited except such as may be approved by the Technical Secretary upon a showing to him that there is no other practical, safe, and lawful method of disposal. Such open burning so approved by the Technical Secretary shall only be done with a valid permit and subject to the provisions of such permit.

(3.0) (51.13) SECTION 4 -- PERMITS FOR OPEN BURNING

Any person having a valid permit to conduct open burning issued prior to April 3, 1972, may continue such open burning as authorized by the permit until the expiration date of the permit.

Any person proposing to conduct open burning not authorized by a valid permit issued prior to April 3, 1972, shall make application for and have in his possession a valid open burning permit before such open burning is commenced.

Application for an open burning permit shall be made on forms supplied by the Department. Failure to submit completed forms or to supply requested supplementary information concerning a proposed open burning operation shall constitute just cause for refusing issuance of a permit. Failure to adhere to substantive provisions of any permit shall be just cause for revocation of the permit by the Technical Secretary.

Obtaining an open burning permit as required in this regulation does not relieve any person of the responsibiltiy of obtaining a permit required by any other agency or complying with other requirements of such agencies. Particular attention is directed to Section 39-518 Tennessee Code Annotated.

CHAPTER V

(50.1.2) VISIBLE EMISSION REGULATIONS

(1.0) SECTION 1 -- DEFINITIONS

As used in this Chapter, existing air contaminant source refers to such sources as were in operation or under construction prior to August 9, 1969, and new air contaminant sources refers to such sources as began construction on or after August 9, 1969.

(2.0) SECTION 2 -- GENERAL

A. No person shall cause, suffer, allow or permit discharge of a visible emission from any new air contaminant source with a density greater than number one (1) of the Ringelmann Chart or any opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any twenty-four (24) hour period.

B. On and after August 9, 1973, no person shall cause, suffer, allow or permit discharge of a visible emission from any existing air contaminant source with a density equal to or greater than number two (2) of the Ringelmann Chart or an opacity equal to or in excess of forty (40) percent for more than five (5) minutes in any one (1) hour or an aggregate of more than twenty (20) minutes in any twenty-four (24) hour period.

C. On and after August 9, 1975, the provisions of subsection B of this Chapter shall no longer be applicable and all air contaminant sources shall be construed as new sources for the purpose of this Chapter.

D. Due allowance shall be made for visible emissions in excess of that permitted in sub-sections A and B of this Chapter which are necessary or unavoidable due to start-up, breakdown or upset conditions provided the owner or operator shall maintain a running, current log of such start-up, breakdown or upset condition showing the time at which such condition began and ended and that such record shall be available to the Technical Secretary or his representative upon request. For those operations subject to a permit, it shall be permissible to omit the record of start-up conditions not in compliance with sub-sections A and B provided such start-up condition has been made a part of the permit.

E. It is expressly intended that in testing compliance with sub-sections A and B that visible emissions tending to produce a black plume will be evaluated in terms of the Ringelmann scale and that visible emissions tending to produce a non-black plume will be evaluated in terms of equivalent opacity and expressed as percent opacity.

F. Visible emissions from fuel-burning equipment used exclusively to provide space heating in a building containing not more than two (2) dwelling units shall not be subject to the provisions of this Chapter.

CHAPTER VI

(50.1) NON-PROCESS EMISSION STANDARDS

(50.1) SECTION 1 -- GENERAL NON-PROCESS PARTICULATE EMISSIONS

A. No person shall cause, suffer, allow or permit particulate emissions in excess of the standards in this Chapter.

B. The Board shall be responsible for setting an appropriate emission standard for each non-process air contaminant source discharging particulate matter in any county where all such sources are emitting particulates at rates in conformity with the applicable maximum allowable emission standard and yet the ambient air quality standard for particulate matter is being exceeded in that county.

C. The owner or operator of an existing fuel burning installation proposing to make a modification of this source or to rebuild or replace it shall only take such action if it will result in the source meeting the maximum allowable particulate emission standards for a new fuel burning installation.

D. As used in this chapter, existing installation or equipment shall mean such as were under construction or in operation prior to April 3, 1972.

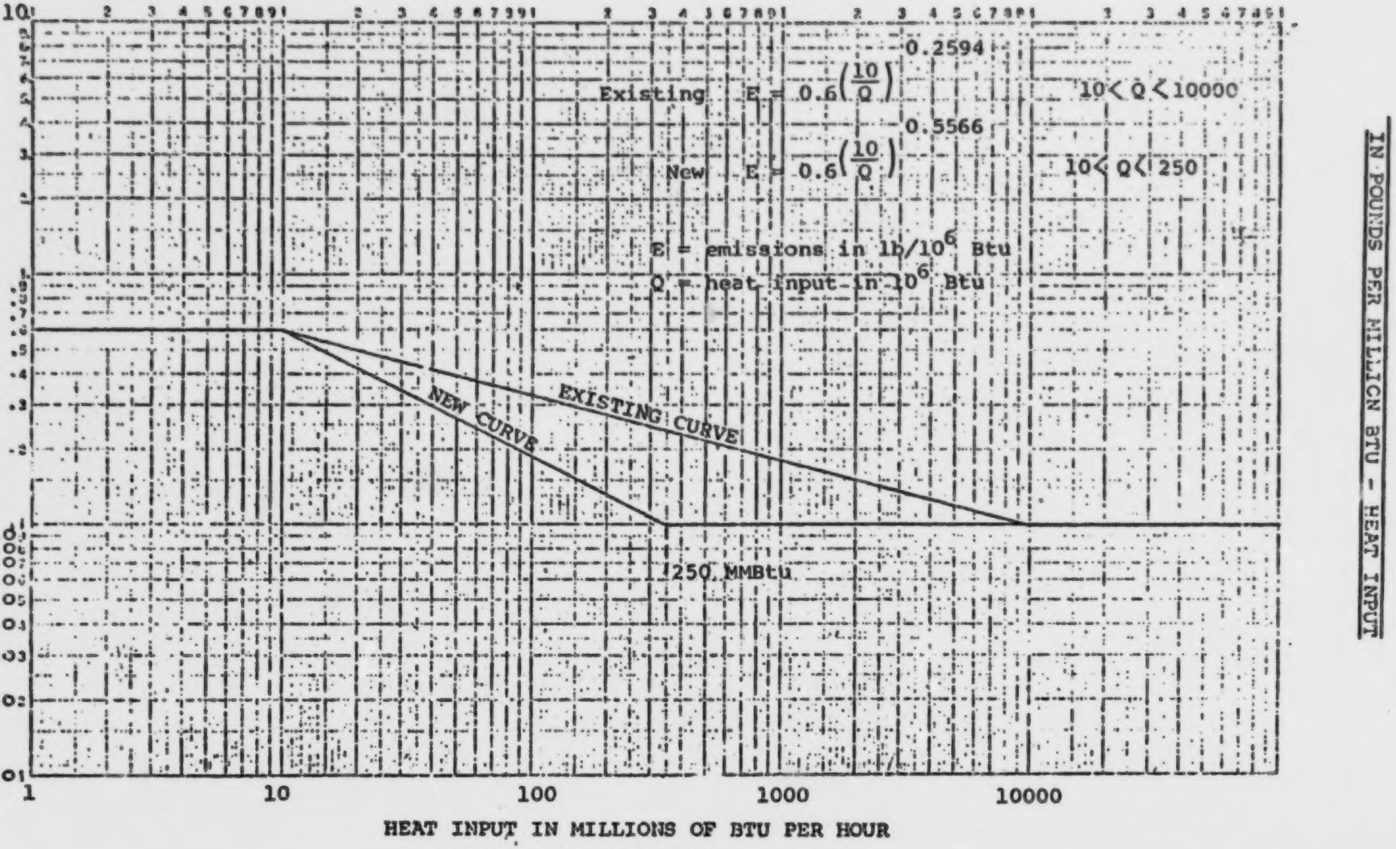
(50.1) SECTION 2 -- NON-PROCESS PARTICULATE EMISSION STANDARDS

(51.5) A. CHOICE OF STANDARDS - EXISTING FUEL BURNING EQUIPMENT

Any fuel burning installation operating or under construction prior to August 9, 1969 shall attain the allowable emission standard from either the diffusion equation presented in subsection 1 below or the particulate curve (Figure 1) in subsection 2 below. The owner or operator of such a fuel burning installation shall make known, in writing, to the Technical Secretary by July 1, 1972, his choice of emission standard. If no choice is indicated, the Technical Secretary shall designate the Particulate Curve (Figure 1) subsection 2 as the applicable standard. Provided however, that after July 1, 1975, no existing fuel burning installation shall discharge particulate emissions in excess of subsection 2 below (Figure 1 - existing particulate curve).

1. DIFFUSION EQUATION

For existing installations up to and including 4000 million BTU per hour total plant heat input, the maximum allowable particulate emission shall be as determined by the following equation, provided, however, that no emission in excess of six tenths (6.0) pounds



EXCLUDE GAS FIRED UNITS
FIGURE 1

per million BTU shall be permitted from any installation. Such limit shall be achieved by August 9, 1973.

$$D = \frac{20650\ a\ h}{Q^{0.75}}$$

in which D is the maximum allowable particulate emission in pounds per million BTU heat input, h is the stack height in feet, a is a dimensionless factor of 0.67 for stacks of 200 feet height and less, and o.80 for stacks in excess of 200 feet, and Q is the combined heat input in BTU per hour to the entire fuel-burning installation, the allowable emission limit as determined by the above equation shall be further reduced by dividing the emission limit so obtained by $n^{0.25}$, where n is the number of stacks of equal height. Stacks varying in height may be contrued as being of equal height provided a weighted average stack height is used in computing the allowable emission limit.

2. HEAT INPUT

The maximum allowable particulate emission limits as given in this Subsection are based upon the total plant rate of heat input to one or more stacks. Where natural gas or liquified petroleum is used as a fuel the BTU heat input from these fuels shall not be included. For existing fuel-burning installations up to and including 4000 million BTU per hour total plant heat input, the maximum allowable particulate emission shall be determined from Figure 1, existing curve, and shall be achieved by August 9, 1973.

Emission limits for all existing fuel burning installations in excess of 4000 million BTU per hour will be determined by Figure 1, existing particulate curve, up to 10,000 million BTU per hour will be determined from Figure 1. This allowable emission standard must be attained on or before July 1, 1975.

(51.5) B. NEW FUEL BURNING EQUIPMENT

For fuel burning installations constructed after April 3, 1972, the maximum allowable particulate emission shall be determined from Figure 1, new particulate curve, based upon the total plant rate of heat input to one or more stacks. Where natural gas or liquified petroleum is used as a fuel, the BTU heat input from these fuels shall not be included.
This allowable emission standard must be attained at the time such fuel burning installation begins operation.

(51.9) C. INCINERATORS

From and after the effective date of these Regulations, the maximum allowable particulate emission from incinerators shall be as indicated in Table 1 of this Chapter. It is further provided that from and after July 1, 1975, the particulate emission standards as given for existing incinerators shall no longer be applicable and the particulate emission standards as given for new incinerators shall be applicable to all incinerators.

MAXIMUM ALLOWABLE PARTICULATE EMISSION

STANDARDS FOR INCINERATORS

Rated or Operated Charging Rate in Pounds Per Hour	Emission Standard in Percent of Charging Rate	
	New Incinerator	Existing Incinerator
Less than 200	0.2	0.6
200 to 2000	0.2	0.4
Greater than 2000	0.1	0.4

Incincerators having 2.5 cu. ft. furnace volume or less used solely for the disposal of infective dressings and other similar material shall not be required to meet these emission standards.

(51.20) D. WIGWAM BURNERS

1. EXISTING WIGWAM BURNERS

After August 9, 1973, no Wigwam Burner constructed prior to April 3, 1972 shall be issued an operating permit unless equipped to maintain a minimum exit gas temperature of 800°F. This temperature shall be achieved as rapidly as possible at start-up. The maximum start-up time shall be limited to ten (10) minutes. An auxiliary burner may be used to reduce start-up time. Only one start-up period per 24-hour day shall be permitted. To demonstrate that these requirements are met, an exit temperature sensing and recording device shall be installed and maintained in operating condition. These records shall be submitted to the Technical Secretary on a monthly basis.

Emission Limit for Existing Wigwam Burners

The maximum allowable particulate emission limit for Wigwam Burners is four tenths (0.4) pound per one hundred (100) pounds of material as charged. This limit must be achieved by not later than August 9, 1973.

2. NEW WIGWAM BURNERS

Wigwam Burners constructed or modified after April 3, 1972 shall be equipped, as a minimum, as required in Paragraph 1 of subsection D.

In addition, an operator or other designated person at the site of the wigwam burner must be certified as a qualified smoke reader. Such certified smoke reader must observe the visible emissions from the wigwam burner on at least ten (10) operating days each calendar month and record these readings on forms provided by the Technical Secretary. At least one reading must encompass start-up conditions and at least one reading must encompass shut-down conditions. Such readings shall be submitted to the Technical Secretary within ten (10) days after the end of each calendar month. If violations of the visible emissions standards are shown, a satisfactory explanation noting the cause of the violation and the corrective action taken must accompany such submittal.

Emission Limit for New Burners

The maximum allowable particulate emission limit for Wigwam Burners is three tenths (0.3) pound per one hundred (100) pounds of material as charged. Particulate test data shall be submitted annually to insure continued compliance with this emission standard.

3. EXCEPTION TO WIGWAM BURNER

a. Whenever a wigwam burner meets the more restrictive standards of Section 2(c), this Chapter, applicable to new incinerators, it is expressly provided that such wigwam burner shall be governed by the standard of Section 2(c) rather than by the standards of this subsection upon written request of the owner or the operator. Provided, however, that the owner or operator shall furnish to the Technical Secretary particulate emission test results to show compliance with the standard of Section 2(c) as an attachment to this request. Particulate test data shall be submitted annually thereafter to insure continued compliance with the emission standard of Section 2(c).

b. Whenever, in the opinion of the Technical Secretary, the design of a wigwam burner prohibits the installation of the temperatures sensing and recording device, such requirement may be waived by the Technical Secretary; provided, however, that an operator or other designated person at the site of the wigwam burner is certified as a qualified smoke reader.

Such certified smoke reader must observe the visible emissions from the wigwam burner or at least ten (10) operating days each calendar month and record these readings on forms provided by the Technical Secretary. At least one reading must encompass start-up conditions and at least one reading must encompass shut-down conditions. Such readings shall be submitted to the Technical Secretary within ten (10) days after the end of each calendar month. If violations of the visible emissions standards are shown, a satisfactory explanation noting the cause of the violation and the corrective action taken must accompany such submittal.

(50.0) SECTION 3 -- GENERAL PROVISIONS AND APPLICABILITY FOR PROCESS GASEOUS EMISSION STANDARDS.

A. No person shall cause, suffer, allow or permit gaseous emissions in excess of the standards in this Chapter.

B. Construction or modification of an air contaminant source emitting gaseous air contaminants after April 3, 1972 requires the installation and utilization of the best equipment and tecnnology currently available for controlling such gaseous emissions.

CHAPTER VII

(50.1.1) PROCESS EMISSION STANDARDS

(50.1.1) SECTION 1 -- GENERAL PROCESS PARTICULATE EMISSION STANDARDS

A. No person shall cause, suffer, allow or permit particulate emissions in excess of the standards in this Chapter.

B. The Board shall be responsible for setting an appropriate emission standard for each process air contaminant source discharging particulate matter in any county where all such sources are emitting particulates at rates in conformity with the applicable maximum allowable emission standard and yet the ambient air quality standard for particulate matter is being exceeded in the county.

C. The owner or operator of an existing process emission source proposing to make a modification of this source or to rebuild or to replace it shall only take such action if it will result in the source meeting the maximum allowable particulate emission standard for a new process emission source.

(50.1.1) SECTION 2 -- CHOICE OF PARTICULATE EMISSION STANDARDS EXISTING PROCESSES

A. Any process emission source operating or under construction prior to August 9, 1969 shall attain the allowable emission standard from either the diffusion equations presented in subsection C(2) below or the Process Weight Table in Subsection 2(D) below.

The owner or operator of such a process emission source shall make known, in writing, to the Technical Secretary by July 1, 1972, his choice of emission standard. If no choice is so indicated, the Techincal Secretary shall designate the emission standard of Section 2(D) (Process Weight Table) below as the applicable standard. The emission standard chosen, either by the owner or operator or by the Technical Secretary, must be attained on or before August 9, 1973.

B. For any process emission source constructed after August 9, 1969, and before April 3, 1972, the allowable emission standard shall be the diffusion equations presented in Section 2(C) below. This standard must have been attained at the time such process emission source first commenced operation. The owner or operator of such a source shall make known in writing to the Technical Secretary by July 1, 1972, whether he wishes to continue under the diffusion equation standard or to switch to the Process Weight Table standard presented in Section 2(D) (Process Weight Table) below as the applicable standard. If the Process Weight Table standard is chosen by such owner or operator or by the Technical Secretary, then such owner or operator shall have unitl August 9, 1973 to convert fully to the Process Weight Table standard. It is expressly stipulated that in the interim period such a process emission source shall continue to observe the diffusion equation standard originally applicable.

C. For those owners or operators of process emission sources who elect to have their process emissions regulated by diffusion equations, the maximum allowable particulate emissions from such sources shall be determined by the procedures defined in (1), (2), and (3) below.

1. Stack gas exit temperature less than 100° F (See Note)

   $$Q = 3.02 \times 10^{-4} V_s h_s^{2} \left(\frac{d_s}{h_s}\right)^{0.71}$$

2. Stack gas exit temperatures of 125° F or greater (See Note)
   a. Stacks less than 500 feet

   $$Q = 0.3h_s \ Q_T \times 0.02 \times (T_x - 60)^{0.25}$$

   b. Stacks 500 feet and greater

   $$Q = 0.3h_s Q_T \times 0.02 \times (T_s - 60)^{0.25}$$

3. For stack gas exit temperature from 100° F to 124° F calculate allowable emission as in 1 and either 2a or 2b depending upon stack height (using T_s of 125° F) and make linear interpolation based upon actual gas exit temperature.

   The terms of the preceding equations shall have the following meaning and units:

   d_s - inside diameter or equivalent diameter of stack tip in feet

   h_s - stack height in feet (Vertical distance above grade directly below tip of stack)

   Q - Maximum allowable emission rate in pounds per hour

   Q_T - volume rate of stack gas flow in cubic feet per second calculated to 60° F

   T_s - temperature of stack gases at stack tip in feet per second

Note: In determining applicability of equations in this subsection based upon exit gas temperature the actual exit gas temperature must equal or exceed the stated temperature during ninety (90) percent or more of the operation time.

D. For those owners or operators of process emission sources who elect to have their process emissions regulated by the Process Weight Table, the maximum allowable particulate emissions from a process emission source shall be determined by Table 1.

E. Whichever standard is chosen, all sources at the same facility must be regulated by that standard.

(50.1.1) SECTION 3 -- NEW PROCESS EMISSION SOURCES

The allowable emission level of particulate matter from any process emission source beginning operation on or after April 3, 1972, shall be determined by Table 2.

A. Irrespective of the maximum allowable emission as determined by any of the preceding equations or Process Weight Tables in this Chapter, the concentration of particulate process emissions shall not be required to be less than 0.02 grain per cubic foot of stack gases corrected to 70° F and 1 atmosphere unless a lesser concentration is found by the Board to be necessary.

B. Irrespective of the maximum allowable emission as determined by any of the preceding equations or Process Weight Tables in this Chapter the maximum allowable concentration of particulate process emissions shall be 0.25 grains per cubic foot of stack gases corrected to 70° F and 1 atmosphere.

(50.1.1) SECTION 5 -- SPECIFIC PROCESS EMISSION STANDARDS

The emission limits set forth in Sections 2, 3 or 4 will apply unless a specific process emission standard for a specifically designated type of process emission source is contained in a subsequent Section of this Chapter.

(10.0) SECTION 6 -- STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

The Technical Secretary may from time to time, without public hearing, designate additional standard(s) of performance for new stationary sources as promulgated by the Environmental Protection Agency and published in the Federal Register.

(50.0) SECTION 7 -- GENERAL PROVISIONS AND APPLICABILITY FOR PROCESS GASEOUS EMISSION STANDARDS

A. No person shall cause, suffer, allow or permit gaseous emissions in excess of the standards in this Chapter.

B. Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after the effective date of these regulations shall install and utilize equipment and technology which is deemed reasonable and proper by the Technical Secretary.

(50.4) SECTION 9 -- HYDROCARBON EMISSIONS

A. STORAGE OF VOLATILE ORGANIC MATERIALS

No person shall place, store, or hold in any stationary tank reservoir or other container of more than 40,000 gallons capacity any volatile organic compounds unless such tank, reservoir, or other container is a pressure tank capable of maintaining working pressures, sufficient at all times to prevent vapor or gas loss to the atmosphere or is designed, and equipped with one of the following vapor loss control devices:

1. A floating roof, consisting of a pontoon type, double deck type roof, or internal floating cover which will rest on the surface of the liquid contents and be equipped with a closure seal or seals to close the space between the roof edge and tank wall. This control equipment shall not be permitted if the volatile organic compounds have a vapor pressure of 11.0 pounds per square inch absolute or greater under actual storage conditions. All tank gauging or sampling devices shall be gas-tight except when tank gauging or sampling is taking place.

2. A vapor recovery system, consisting of a vapor gathering system capable of collecting the volatile organic compound vapors and gases discharged and a vapor disposal system capable of processing such volatile organic vapors and gases so as to prevent their emission to the atmosphere and with all tank gauging and sampling devices gas-tight except when gauging or sampling is taking place.

3. Other equipment or means of equal efficiency for purposes of air pollution control as may be approved by the Technical Secretary.

4. No person shall place, store, or hold in any stationary storage vessel of more than 250-gallon capacity any volatile organic compound unless such vessel is equipped with a permanent submerged fill pipe or is a pressure tank as described in subsection B or is fitted with a vapor recovery system as described in B(2).

B. VOLATILE ORGANIC MATERIALS LOADING FACILITIES

1. No person shall load any volatile organic compounds into any tank, truck, or trailer from any loading facility unless such loading facility is equipped with a vapor collection and disposal system or its equivalent, properly installed, in good working order, and in operation.

2. No person shall load any volatile organic compounds into any tank, truck, or trailer from any loading facility unless such loading facility is equipped with a loading arm with a vapor collection adaptor. Pneumatic, hydraulic, or other mechanical means shall be provided to force a vapor-tight seal between the adaptor and the hatch. A means shall be provided to prevent liquid organic compounds drainage from the loading device when it is removed from the hatch of any tank, truck, or trailer, or to accomplish complete drainage before such removal. When loading is effected through means other than hatches, all loading and vapor lines shall be equipped with fittings which make vapor-tight connections and which close automatically when disconnected.

C. VOLATILE ORGANIC COMPOUND WATER SEPARATION

No person shall use any compartment of any single or multiple compartment volatile organic compound water separation device which compartment receives effluent water containing 200 gallons a day or more or any volatile organic compound from any equipment processing, refining, treating, storing, or handling volatile organic compounds having a Reid vapor pressure of 0.5 pounds or greater unless such compartment is equipped with one of the following vapor loss control devices, properly installed, in good working order, and in operation:

1. A container having all openings sealed and totally enclosing the liquid contents. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

2. A container equipped with a floating roof, consisting of a pontoon-type or double-deck type roof, or internal floating cover, which will rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof edge and container wall. All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

3. A container equipped with a vapor recovery system consisting of a vapor gathering system capable of collecting the organic vapors and gases discharged and a vapor disposal system capable of processing such organic vapors and gases so as to prevent their emission to the atmosphere and with all container gauging and sampling devices gas-tight except when gauging or sampling is taking place.

4. A container having other equipment of equal efficiency for purposes of air pollution control as may be approved by the Technical Secretary.

D. PUMPS AND COMPRESSORS

All pumps and compressors handling volatile organic compounds shall have mechanical seals or other equipment of equal efficiency for purposes of air pollution control as may be approved by the Technical Secretary.

E. WASTE GAS DISPOSAL

1. No person shall emit a waste gas stream from any ethylene producing plant into the atmosphere unless the waste gas stream is properly burned to 1,000° for 0.3 seconds or greater in a direct-flame afterburner equipped with an indicating pyrometer which is positioned in the working area at the operator's eye level or an equally effective catalytic vapor incinerator also with pyrometer.

2. No person shall emit organic gases to the atmosphere from a vapor blow-down system unless these gases are burned by smokeless flares, or an equally effective control device as approved by the Technical Secretary.

F. ORGANIC SOLVENTS

1. A person shall not discharge into the atmosphere more than 15 pounds of organic materials in any one day, nor more than 3 pounds in any one hour, from any article, machine, equipment, or other contrivance, in which any organic solvent or any material containing organic solvent comes into contact with flame or is baked, heat-cured or heat-polymerized, in the presence of oxygen, unless said discharge has been reduced by at least 85 percent. Those portions of any series of articles, machines, equipment or other contrivance designed for processing a continuous web, strip or wire which emit organic materials and using operations described in this section shall be collectively subject to compliance with this section.

2. A person shall not discharge into the atmosphere more than 40 pounds of organic materials in any one day, nor more than 8 pounds in any one hour, from any article, machine, equipment or other contrivance used under conditions other than described in G(2) for employing, or applying, any photochemically reactive solvent, as defined in G(10) or material containing such photochemically reactive solvent, unless said discharge has been reduced by at least 85 percent. Emissions of organic materials into the atmosphere resulting from air or heated drying of products for the first 12 hours after their removal from any article, machine, equipment, or other contrivance described in this section shall be included

in determining compliance with this section. Emissions resulting from baking, heat-curing, or heat-polymerizing as described in G(1) shall be excluded from determination of compliance with this section. These portions of any series of articles, machines, equipment or other contrivances designed for processing a continuous web, strip or wire which emit organic materials and using operations described in this section shall be collectively subject to compliance with this section.

3. A person shall not discharge into the atmosphere more than 3,000 pounds of organic materials in any one day, nor more than 450 pounds in any one hour, from any article, machine, equipment or other contrivance in which any non-photochemically reactive organic solvent or any material containing such solvent is employed or applied, unless said discharge has been reduced by at least 85 percent. Emissions of organic materials into the atmosphere resulting from air or heated drying of products for the first 12 hours after their removal from any article, machine, equipment, or other contrivance described in this section shall be included in determining compliance with this section. Emission resulting from baking, heat-curing, heat-polymerizing as described in G(1) shall be excluded from determination of compliance with this section. Those portions of any series of articles, machines, equipment or other contrivances designed for processing a continuous web, strip, or wire which emit organic materials and using operations described in this section shall be collectively subject to compliance with this section.

4. Emissions of organic materials to the atmosphere from the cleanup with photochemically reactive solvent, as defined in G(10) of any article, machine, equipment or other contrivance described in G(1), G(2), or G(3) shall be included with the other emissions or organic materials from that article, machine, equipment or other contrivance for determining compliance with rule.

5. Emissions of organic materials into the atmosphere required to be controlled by G(1), G(2), or G(3):

   a. Incineration, provided that 90 percent or more of the carbon in the organic material being incinerated is oxidized to carbon dioxide, or

   b. Absorption, or

   c. Processing in a manner determined by the Technical Secretary to be not less effective than (a) or (b) above.

6. A person incinerating, absorbing, or otherwise processing organic materials pursuant to this rule shall provide, properly install and maintain in calibration, in good working order and in operation, devices as specified in the authority to construct or the permit to operate, or as specified by the Technical Secretary, for indicating temperatures, pressures, rates of flow or other operating conditions necessary to determine the degree and effectiveness of air pollution control.

7. Any person using organic solvents or any materials containing organic solvents shall supply the Technical Secretary, upon request and in the manner and form prescribed by him, written evidence of the chemical composition, physical properties and amount consumed for each organic solvent used.

8. The provisions of this rule shall not apply to:

   a. The manufacture of organic solvents, or the transport or storage of organic solvents or materials containing organic solvents.

   b. The use of equipment for which other requirements are specified by subsection B, C, or D which are exempt from air pollution control requirements by said rules.

   c. The spraying or other employment of insecticides, pesticides or herbicides.

   d. The employment, application, evaporation or drying of saturated halogenated hydrocarbons or perchlorethylene.

   e. The use of any material, in any article, machine, equipment or other contrivance described in G(1), G(2), G(3) G(4) if:

      1. the volatile content of such material consists only of water and organic solvents, and

      2. the organic solvents comprise not more than 20 percent of said volatile content, and

      3. the volatile content is not photochemically reactive as defined in G(10).

9. For the purpose of this rule, organic solvents include diluents and thinners and are defined as organic materials which are liquids at standard conditions and which are used as dissolvers, viscosity reducers or cleaning agents,

except that such materials which exhibit a boiling point higher than 220° F at 0.5 millimeter mercury absolute pressure or having an equivalent vapor pressure shall not be considered to be solvents unless exposed to temperatures exceeding 220° F.

10. For the purposes of this rule, a photochemically reactive solvent is any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified below or which exceeds any of the following individual percentage composition limitations, referred to the total volume of solvent:

    a. A combination of hydrocarbons, alchohols, aldehydes, esters, ethers or ketones having an olefinic or cycloolefinic type of unsaturation: 5 percent;

    b. A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent;

    c. A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the above groups of organic compounds, it shall be considered as a member of the most reactive chemical group, that is, that group having the least allowable percent of the total volume of solvents.

11. For the purpose of this rule, organic materials are defined as chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbies, metallic carbonates and ammonium carbonate.

G. DISPOSAL AND EVAPORATION OF SOLVENTS

A person shall not, during any one day, dispose of a total of more than 1½ gallons of any photochemically reactive solvent, as defined in G(10), or of any material containing more than 1½ gallons of any such photochemically reactive solvent by any means which will permit the evaporation of such solvent into the atmosphere.

(51.0) SECTION 10 -- SPECIFIC PROCESS EMISSION STANDARDS

(51.18) A. SULFURIC ACID PLANTS

1. EXISTING SULFURIC ACID PLANTS

No later than July 1, 1975, no person shall cause, suffer, allow or permit the following emission into the open air from any sulfuric acid plant under construction or in operation prior to April 3, 1972.

a. Sulfur dioxide in the effluent in excess of 6.5 pounds per ton of acid produced, maximum 2 hour average or 500 ppm (0.05% by volume dry basis) of sulfur dioxide.

b. Sulfuric acid mist in the effluent in excess of 0.50 pound per ton of acid produced, maximum 2 hour average expressed as H_2SO_4.

2. NEW SULFURIC ACID PLANTS

No person shall cause, suffer, allow or permit the following emission into the open air from any sulfuric acid plants constructed after April 3, 1972 in excess of the following:

a. Sulfur dioxide in the effluent in excess of 4 pounds per ton of acid produced, maximum 2 hour average, or 350 parts per million (0.35 percent by volume dry basis) of sulfur dioxide, whichever is the more restrictive.

b. Sulfuric acid mist in the effluent in excess of 0.15 pound per ton of acid produced, maximum 2 hour average, expressed as H_2SO_4.

(51.4) B. EXISTING FERROUS JOBBING CUPOLAS

No later than August 9, 1973, the maximum particulate emission rate from existing ferrous jobbing cupolas shall be as given in subsection B(1) (Table 3), or subsection 2 whichever is appropriate.

TABLE 3

ALLOWABLE RATE OF PARTICULATE EMISSION BASED

ON PROCESS WEIGHT RATE

EXISTING FERROUS JOBBING CUPOLAS

Process Weight (#/hr)	Maximum Weight Dishcarge (#/hr)
1,000	3.05
2,000	4.70
3,000	6.35

Process Weight (#/hr)	Maximum Weight Discharge (#/hr)
4,000	8.00
5,000	9.58
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
16,000	21.60
18,000	23.40
20,000	25.10

The emission rate for a process weight intermediate to those shown in the Table shall be determined by linear interpolation.

2. Any existing ferrous jobbing cupola which melts ten (10) tons or less per 24 hour day shall be deemed in compliance if particulate emissions do not exceed eight (8) pounds per ton of metal melted.

(51.1) C. EXISTING COTTON GINS

1. No person shall cause, or permit the emission of particulate matter in any one hour from any cotton gin operation in excess of the amount shown in Table 4 for the process weight per hour allocated to such operation. Particulate matter emissions subject to this Part include process emissions and wigwam or incinerator emissions if any; provided, however, that this shall in no way relieve or affect the application of Chapter IV, Chapters V and VI at cotton gin operations.

2. Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this Part, the interpretation that results in the minimum value for allowable emission shall apply.

3. For purposes of this Part, the total process weight from all similar process units at a plant or premises shall be used for determining the maximum allowable emission of particulate matter that passes through a stack or stacks.

TABLE 4

ALLOWABLE PARTICULATE MATTER EMISSION BASED ON PROCESS WEIGHT RATE FOR COTTON GINS

Process Weight Rate (lb/hr)	Allowable Emission Rate (lb/hr)	Process Weight Rate (lb/hr)	Allowable Emission Rate (lb/hr)
1,000	1.6	9,000	13.7
1,500	2.4	10,000	15.2
2,000	3.1	12,000	18.2
2,500	3.0	14,000	21.2
3,000	4.7	16,000	24.2
3,500	5.4	18,000	27.2
4,000	6.2	20,000	30.1
5,000	7.7	30,000	44.9
6,000	9.2	40,000	59.7
7,000	10.7	50,000	64.0
8,000	12.2	60,000 or more	67.4

The emission rate for a cotton gin intermediate between those shown in Table 4 shall be determined by linear interpolation.

(51.10) D. EMISSION FROM NITRIC ACID PLANTS

1. Existing Nitric Acid Plants

After July 1, 1975, no person shall cause, suffer, allow or permit the emission into the open air of nitrogen oxides from any nitric acid plant under construction or in operation prior to April 3, 1972, which are:

in excess of 5.5 lbs per ton of acid produced maximum 2 hour average, expressed as NO_2; or

400 ppm (0.0$% by volume dry basis) of nitrogen oxides, measured as NO_2, whichever is the more restrictive.

2. New Nitric Acid Plants

After April 3, 1972, no person shall cause, suffer, allow or permit the emission into the open air of nitrogen oxides from any new nitric acid plants which are in excess of:

1. 3 lbs per ton of acid produced, maximum 2-hour average, expressed as NO_2; or 209 ppm (0.0209% by volume dry basis) of nitrogen oxides, measured as NO_2, whichever is the more restrictive.

(51.3) E. NEW PORTLAND CEMENT PLANTS

After April 3, 1972, no person shall cause, suffer, allow or permit the emission into the open air of particulates from any new portland cement plant which are:

1. From the kiln in excess of 0.30 lb per ton of feed to the kiln, maximum 2-hour average;
2. From the clinker cooler in excess of 0.10 lb. per ton of feed to the kiln, maximum 2-hour average.

(51.14) F. EXISTING KRAFT MILLS

After August 9, 1973, no person shall cause, suffer, allow or permit particulate emissions from a kraft mill under construction or operation to April 3, 1972 in excess of the standard chosen in Chapter VII, Section 2(A) or 2(B); provided, however, that after July 1, 1977 said emissions are as follows:

1. Particulate matter from all recovery stacks shall not exceed three pounds per ton of equivalent air-dried kraft pulp.
2. Particulate matter from all lime kilns shall not exceed one pound per ton of equivalent air dried kraft pulp.
3. Particulate matter from all smelt tanks shall not exceed one-half pound per ton of equivalent air dried kraft pulp.

(51.8) G. EXISTING ASPHALT PLANTS

After August 9, 1973, no person shall cause, suffer, allow or permit particulate emission from any asphalt plant, under construction or in operation prior to April 3, 1972, in excess of the standard chosen in Chapter VII, Section 2(A) or 2(B); provided, however, that no later than July 1, 1975, these emissions shall not be in excess of the following:

Process Weight Rate (lbs/hr)	Rate of Emission #/hr
100	0.551
200	0.877
400	1.40
600	1.85
800	2.22
1,000	2.58
1,500	3.38
2,000	4.10

Process Weight Rate (lbs/hr)	Rate of Emission #/hr
2,500	4.76
3,000	5.38
3,500	5.96
4,000	6.52
5,000	7.58
6,000	8.56
7,000	9.49
8,000	10.4
9,000	11.2
12,000	13.6
16,000	16.5
18,000	17.9
20,000	19.2
30,000	25.2
40,000	30.5
50,000	35.4
60,000 or more	40.0

Interpolation of the data in this table for process weight rates up to 60,000 lbs/hr shall be accomplished by the use of the equation $E = 4.10P^{0.67}$, E = rate of emission is lbs/hr and P = process weight rate in tons/hr.

CHAPTER VIII

(50.1)

FUGITIVE DUST

(2.0) SECTION 1 -- GENERAL

A. No person shall cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads or the clearing of land:

2. Application of asphalt, oil, water or suitable chemicals on dirt roads, materials stock piles, and other surfaces which can create airborne dusts:

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

B. No person shall cause, suffer, allow or permit fugitive dust to be emitted in such manner to exceed five (5) minutes per hour or twenty (20) minutes per day as to produce a visible emission beyond the property line of the property on which the emission originates excluding malfunction of equipment as provided in Chapter X, Section 3.

(6.0) SECTION 2 -- COMPLIANCE SCHEDULE

A. For those operations under construction or in operation prior to April 3, 1972, fugitive dust control must be achieved by August 9, 1973.

B. For those operations, the construction of which commences after April 3, 1972, fugitive dust control must be achieved at the time operation commences.

TABLE 1

EXISTING PROCESS EMISSION SOURCES
ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE[a]

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
100	0.05	0.551	16,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.0	19.2
600	0.30	1.83	30,000	15.	25.2
800	0.40	2.22	40,000	20.	30.5
1,000	0.50	2.58	50,000	25.	35.4
1,500	0.75	3.38	60,000	30.	40.0
2,000	1.00	4.10	70,000	35.	41.3
2,500	1.25	4.76	80,000	40.	42.5
3,000	1.50	5.38	90,000	45.	43.6
3,500	1.75	5.96	100,000	50.	44.6
4,000	2.00	6.52	120,000	60.	46.3
5,000	2.50	7.58	140,000	70.	47.8
6,000	3.00	8.56	160,000	80.	49.0
7,000	3.50	9.49	200,000	100.	51.2
8,000	4.00	10.4	1,000,000	500.	69.0
9,000	4.50	11.2	2,000,000	1,000	77.6
10,000	5.00	12.0	6,000,000	3,000	92.7
12,000	6.00	13.6			

[a] Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E = 4.10\ p^{0.67}$ and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$$E = 55.0p^{0.11} - 40$$, where E = rate of emission in lb/hr

and p = process weight rate in tons/hr.

TABLE 2

NEW PROCESS EMISSION SOURCES

ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE [a]

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
50	0.025	0.03	16,000	8.00	13.0
100	0.05	0.55	18,000	9.00	14.0
200	0.10	0.86	20,000	10.	15.0
400	0.20	1.32			
600	0.30	1.70	30,000	15.	19.2
800	0.40	2.03	40,000	20.	23.0
1,000	0.50	2.34	50,000	25.	26.4
1,500	0.75	3.00	60,000	30.	29.6
2,000	1.00	3.59	70,000	35.	30.6
2,500	1.25	4.12	80,000	40.	31.2
3,000	1.50	4.62	90,000	45.	31.8
3,500	1.75	5.08	100,000	50.	32.4
4,000	2.00	5.52	120,000	60.	33.3
5,000	2.50	6.34	140,000	70.	34.2
6,000	3.00	7.09	160,000	80.	34.9
7,000	3.50	7.81	200,000	100.	36.1
8,000	4.00	8.5	1,000,000	500.	46.7
9,000	4.50	9.1			
10,000	5.00	9.7			
12,000	6.00	10.9			

[a] Interpolation of the date in Table 2 for the process weight rates up to 60,000 lbs/hr shall be accomplished by the use of the equation:

$$E = 3.59\ P^{0.62} \qquad P \geq 30 \text{ tons/hr}$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs/hr shall be accomplished by use of the equation:

$$E = 17.31\ P^{0.16} \qquad P > 30 \text{ tons/hr}$$

Where: E = Emissions in pounds per hour

P = Process weight rate in tons per hour

CHAPTER IX

(3.0) CONSTRUCTION AND OPERATING PERMITS

(3.0) SECTION 1 -- CONSTRUCTION PERMIT

A. On and after the effective date of these regulations, no person shall begin the construction of a new facility or the modification of a facility existing prior to the effective date of this regulation which may result in the discharge of air contaminants without first having applied for and received from the Technical Secretary a construction permit for the construction or modification of such facility.

B. The application for a construction permit shall be made on forms available from the Technical Secretary not less than ninety (90) days prior to the estimate starting date of construction.

C. In the event the requirement for a construction permit prior to the construction of a new facility or the modification of any existing facility will create an undue hardship on the applicant, the applicant may request of the Technical Secretary a waiver to proceed with construction or modification prior to the issuance of a Construction Permit. The applicant for a waiver shall explain the circumstances which will cause such undue hardship. If a waiver is granted, the applicant shall, as soon as reasonably practical, submit a report containing such information as would have otherwise been required in filing for a construction permit. The applicant, after a waiver is granted, proceeds at his own risk; and if after construction or modification has begun or been completed, the proposed or completed installation does not meet with the Technical Secretary's approval, alterations required to effect such approval shall be made within a reasonable time as specified by the Technical Secretary. In no case shall this reasonable time exceed 180 days after notification that the construction or modification does not meet the Technical Secretary's approval.

D. Construction permits issued under this section are based on the control of air contaminants only and do not in any way affect the applicant's obligation to obtain necessary permits from other governmental agencies.

(3.0) SECTION 2 -- OPERATING PERMIT

A. Any person planning to operate a facility constructed or modified in accordance with a Construction Permit issued by the Technical Secretary, in Section 1, shall apply for and receive an Operating Permit from the Technical Secretary within sixty (60) days after commencement of the operation of said facility.

B. Any person operating a facility discharging air contaminants constructed on or before August 9, 1969, shall obtain an Operating Permit by August 9, 1973.

   1. When the emission from an air contaminant source in existance on or before August 9, 1969 excees maximum allowable emissions as defined in Chapter VI and VII in these regulations, the owner or operator thereof shall, in addition to the information required in Chapter IX, Section 2(B) (2) below, have filed by February 9, 1971, a plan for the reduction of such emission to the extent that the emission does not exceed the maximum allowable emission. Such plan shall have included a time schedule for the accomplishment of such reductions and the final date for completion shall be not later than August 9, 1973. Provided also, that the owner or operator at yearly intervals following submission of the above required plan shall file with the Technical Secretary a progress report showing what action has been taken toward accomplishment of the proposed plant.

   2. As a minimum the following information shall be included for each source: total weight of contaminant released per day; period or periods of operation; composition of the contaminant; physical state of the contaminant; temperature and moisture content of the air or gas stream in which the contaminant is contained; characterization of the variability of contaminant release with respect to rate, composition and physical characteristics; height, velocity and direction of air or gas stream at the point where released to the atmosphere and such other information as may be specifically requested by the Technical Secretary. All such information shall be submitted on forms available from the Technical Secretary. Where an air or gas cleaning device is incorporated in the air or gas stream preceding discharge to the atmosphere, the weight of material removed by the cleaning device, as well as the weight emitted, shall be stated.

C. Any person owning or operating a facility discharging air contaminants constructed after August 9, 1969 and prior to the effective date of these regulations, shall be required to have applied for and received a valid Operating Permit from the Technical Secretary within six (6) months after the effective date of these regulations.

D. When the gaseous emissions from an air contaminant source regulated herein in existence on or before the effective date of these regulations exceeds the maximum allowable for such emissions as defined in these regulations, the owner or operator therof shall, in addition to any other information required by the Technical Secretary and before an Operating Permit for such existing source will be issued by the Technical Secretary, file a plan for the reduction of such emissions to the extent that they do not exceed the maximum allowable for such emissions. Such plan shall include a time schedule for the accomplishment of such reductions and the final date for completion shall be not later than the date required for achieving a reduction to the maximum gaseous emission level. Provided also, that the owner or operator at semi-annual intervals following submission of the above required plan shall file with the Technical Secretary a progress report showing what action has been taken toward accomplishment of the proposed plan.

E. Application for an Operating Permit shall be made on forms available from the Technical Secretary and signed by the applicant. Such application for an operating permit shall be filed with the Technical Secretary not less than thirty (30) days prior to the expiration on an existing Operating Permit.

F. The Operating Permit shall only be issued on evidence satisfactory to the Technical Secretary that the operation of said facility is in compliance with any standards or rules or regulations promulgated by the Board. Such evidence may include a requirement that the applicant conduct such tests as are necessary in the opinion of the Technical Secretary to determine the kind or amount of air contaminants emitted from the equipment or control apparatus. Standard Operating Permits shall be valid for a period of one (1) year or for such longer period of time as the Technical Secretary may designate. A permit issued for a period of less than one (1) year shall be designated as a temporary permit.

G. Any person in possession of an Operating Permit shall maintain said Operating Permit readily available for inspection by the Technical Secretary or his designated representative on the operating premises.

H. Operation of each facility shall be in accordance with the provisions and stipulations set forth in the Operating Permit.

I. An Operating Permit is not transferable from one person to another person nor from one facility to another facility.

J. The Technical Secretary may suspend or revoke either a construction or an operating permit if the permit holder fails to comply with the provisions, stipulations, or compliance schedules specified in the permit. Upon permit revocation, if the permit holder fails to take remedial action, he shall become immediately subject to enforcement actions prescribed in these regulations.

(2.0) SECTION 3

Irrespective of the provisions of the preceding paragraphs of this Chapter, the owner or operator of any air contaminant source shall be responsible for complying with emission regulations as contained in Chapter V, VI, VII and VIII of these regulations at the earliest practicable time and for this purpose the Board shall have the authority and responsibility to require compliance with these regulations at an earlier date than indicated where such earlier compliance may reasonably be accomplished.

No person shall use any plan, activity, device or contrivance which the Technical Secretary determines will, without resulting in an actual reduction of air contaminants, conceal or appear to minimize the effects of an emission which would otherwise constitute a violation of these Regulations. Air introduced for dilution purposes only is considered a circumvention of these regulations.

No person shall discharge from any source whatsoever such quantities of air contaminants, uncombined water, or other materials which cause or have a tendency to cause a traffic hazard or an interference with normal means of public transportation.

Any person affected by any of these regulations shall file emissions data, as a minimum once a year, with the Technical Secretary on forms available from the Secretary.

(2.0) SECTION 4 -- EXEMPTIONS

A. No person shall be required to obtain or file a request for a State permit due to ownership or operation of the following air contaminant sources unless specifically required to do so by the Board:

1. Mobile sources such as: automobiles, trucks, buses, locomotives, planes, boats and ships.

2. Fuel-burning equipment of less than 500,000 BTU per hour capacity.

3. Particulate emissions from a single stack, of an air contaminant source, discharging less than 0.5 pound per hour of non-hazardous particulates or the total particulate emissions from an air contaminant source amounting to less than two (2) pounds per hour of non-hazardous particulates, whichever is the more restrictive.

4. Equipment used on farms for soil preparation, tending or harvesting of crops or for preparation of feed to be used on the farm where prepared.

5. Operations exempted under Chapter IV (Open Burning) of these regulations.

6. Sources within the counties of Shelby, Davidson, Hamilton, and Knox until such time as the Board shall determine that air pollution is not being controlled in such county to a degree consistent with the substantive provisions of the Tennessee Air Pollution Control Act and regulations adopted pursuant thereto.

B. Notwithstanding the exemptions granted in Section 4A above, no person shall discharge, from any source whatsoever, such quantities of air contaminants or other materials which cause or have a tendency to cause injury, detriment, annoyance, or adverse effect to the public.

(2.0) SECTION 5

A. All air contaminant sources not in compliance with those regulations with a final compliance date of July 1, 1975, are required to take the following actions no later than the dates specified. These dates shall not apply to those sources that have obtained or that do obtain a valid, legally enforceable compliance schedule or schedules for July 1, 1975, which are approved by the Tennessee Air Pollution Control Board.

1. Engineering - October 1, 1973 Submit to the Technical Secretary the final control plan for complying with the applicable regulations.

2. Procurement - February 1, 1974 Negotiate and sign all necessary contracts for emission control systems or process modifications; or issue orders for the purchase of component parts to accomplish emission control or process modification.

3. Fabrication - August 1, 1974 Initiate on-site construction of emission control equipment or process modification.

4. Installation - May 1, 1975 Complete on-site construction or installation of emission control equipment or process modification.

5. Adjustment - July 1, 1975 Conduct performance tests and/or certify to the Technical Secretary compliance with applicable regulations.

6. Ten (10) days prior to conducting the performance test, give notice of such test to the Technical Secretary to afford him opportunity to have an observer present.

7. Ten (10) days after the deadline for completing each step (1 - 5), certify to the Technical Secretary whether the increment of progress has been met.

B. Those regulations requiring final compliance by July 1, 1975, include, but are not necessarily limited to, Chapter VI, Section 2-A-2 (Particulate Matter from Non-Process Emission Sources), Chapter VI, Section 2-C (Incinerators), Chapter VII, Section 9-C (Nitric Acid Plants), Chapter VII, Section 9-D (Cotton Gins), Chapter VII, Section 9-G (Asphalt Plants).

This compliance schedule is not applicable to Chapter VI, Section 4-B-1 b (Sulfur Oxides from Non-Process Emission Sources) and Chapter VII, Section 8-B-1 (Process Emission Sources).

CHAPTER X

(9.0)
(13.0)

REQUIRED SAMPLING, RECORDING AND REPORTING

(9.0) SECTION 1 -- SAMPLING REQUIRED TO ESTABLISH AIR CONTAMINANT EMISSION LEVELS

A. NEW FACILITIES

1. There shall be provided for any stack or duct adequate sampling facilities as follows:
    a. Sampling ports of a size, number and location as the Technical Secretary may require.
    b. Safe access to each port.
    c. Such other sampling and testing facilities as the Technical Secretary may require.
2. The Technical Secretary may at his discretion require the applicant for an Operating Permit to conduct or have conducted such tests as are necessary to establish the amount of air contaminants emitted from such equipment or control apparatus. Such tests shall be made at the expense of the applicant and shall be conducted in a manner provided by the Technical Secretary. The Technical Secretary may require that such tests be conducted in the presence of his representative.

B. EXISTING FACILITIES

1. Whenever the Technical Secretary has reason to believe that the emission limits of the regulations set forth herein are being violated, he may require the owner to conduct or have conducted at the owner's expense, tests to determine the emission level of specific air contaminants. The Technical Secretary may require that such tests be conducted in the presence of his representative.
2. The Technical Secretary may conduct tests of air contaminant emissions from any source. Upon request of the Technical Secretary the person responsible for the source to be tested shall provide, at no expense to the Technical Secretary, reasonable and necessary openings in stacks, vents and ducts, along with safe and easy access thereto including a suitable power source to the point of testing for proper determination of the level of air contaminant emissions.

C. PERIODIC TESTING REQUIRED

The Technical Secretary may require the owner or operator of an air contaminant source, as a condition of his Operating Permit, to conduct or have conducted periodic tests to establish the amount of air contaminants emitted. The nature, extent and frequency of such required testing shall be specified in the Operating Permit. Such tests shall be made at the expense of the owner or operator and shall be conducted in a manner approved by the Technical Secretary. The Technical Secretary shall be supplied with such data as stipulated in the Operating Permit.

(13.0) SECTION 2 -- MONITORING OF SOURCE EMISSIONS, RECORDING AND REPORTING OF THE SAME ARE REQUIRED.

A. MONITORING OF EMISSIONS

The Technical Secretary may require the owner or operator of any air contaminant source discharging air contaminants, at the expense of the owner or operator, to install, use and maintain such monitoring equipment as the Technical Secretary shall prescribe; sample such emissions in accordance with methods as the Technical Secretary shall prescribe; establish and maintain records; and make periodic emission reports as required in subsection B.

Each owner or operator of any air contamination source directed by the Technical Secretary to monitor and report on specified air contaminants shall develop and submit a detailed monitoring program; and order and install sampling equipment within the following time schedule:

1. Within 60 days after designation by the Technical Secretary of those air contaminants to be monitored, the owner or operator of the air contaminant source shall submit a detailed monitoring program for approval by the Technical Secretary.
2. Within 30 days after the monitoring program has been approved in writing by the Technical Secretary, sampling and monitoring equipment shall be ordered.
3. Within 90 days after delivery of the equipment the owner or operator of the air contaminant source shall place said equipment in effective operation in accordance with its approved monitoring program.

B. RECORDING AND REPORTING

Records and reports as the Technical Secretary shall prescribe on air contaminant emissions, ambient air concentrations or fuel analyses shall be recorded, compiled and submitted in a format prescribed by the Technical Secretary.

(7.0) SECTION 3 -- MALFUNCTION OF EQUIPMENT, REPORTS REQUIRED

A. In the case of shutdown of air pollution control equipment for necessary scheduled maintenance, the intent to shut down such equipment shall, except as provided in Section 3(B) of this Chapter, be reported to the Technical Secretary at least twenty-four (24) hours prior to the planned shutdown. Such prior notice shall include, but is not limited to the following:

1. Identification of the specific facility to be taken out of service as well as its location and permit number.

2. The expected length of time that the air pollution control equipment will be out of service.

3. The nature and quantity of emissions of air contaminants likely to occur during the shutdown period.

4. Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period.

B. EXCEPTIONS TO SHUTDOWN REPORTING REQUIREMENTS

1. The report described in Section 3(A) of this Chapter are on a routine schedule, the report of the Technical Secretary may be furnished on an annual basis and shall list the dates and times of the routine scheduled shutdowns during the following year.

2. When shutdowns referred to in Section 3(A) of this Chapter are on a routine schedule, the report of the Technical Secretary may be furnished on an annual basis and shall list the dates and time of the routine scheduled shutdowns during the following year.

C. When any emission source, air pollution control equipment, or related facility breaks down in such a manner as to cause the emission of air contaminants for an anticipated or actual duration of at least twenty-four (24) hours in violation of these regulations, the person responsible for such equipment shall immediately notify the Technical Secretary of such failure or breakdown and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Technical Secretary shall be notified when the condition causing the failure or breakdown has been corrected and the equipment is again in operation.

CHAPTER XI

(11.0) HAZARDOUS AIR CONTAMINANTS

(11.0) SECTION 1 -- HAZARDOUS AIR CONTAMINANTS

Hazardous air contaminants are any air contaminants which may cause, or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness, and has been so designated by the Technical Secretary. Asbestos, beryllium and mercury are hereby designated hazardous air contaminants. The Technical Secretary may from time to time, without public hearing, designate additional hazardous air contaminants as designated by the Environmental Protection Agency and published in the Federal Register.

(11.0) SECTION 2 -- INFORMATION REQUIRED CONCERNING HAZARDOUS AIR CONTAMINANTS

A. The owner or operator of one or more sources of hazardous air contaminants in existence on the effective date of this regulation shall, within four (4) months after official notification by the Technical Secretary, file with the Technical Secretary information necessary to allow the evaluation of the air pollution potential of such emissions.

As a minimum, the following information shall be included for each source from which hazardous air contaminants are emitted: identification of hazardous air contaminant; source of hazardous air contaminant; concentration of hazardous air contaminant; total weight of hazardous air contaminant released per day; period or periods of operation; composition of the hazardous air contaminant; physical state of the hazardous air contaminant; temperature and moisture content of the air or gas stream in which the hazardous air contaminant is contained; characterization of the variability of hazardous air contaminant release with respect to rate, composition and physical characteristics; height, velocity and direction of air or gas stream at the point where released to the atmosphere and such other information as may be specifically requested by the Technical Secretary. All such information shall be submitted on forms available from the Technical Secretary.

The owner or operator of a source constructed after the effective date of this regulation shall file with the Technical Secretary not less than 90 days prior to the estimated starting date of construction sufficient information to allow evaluation of the air pollution potential of such hazardous air contaminants.

(11.0) SECTION 3 -- OPERATION OF SOURCE EMITTING HAZARDOUS AIR CONTAMINANTS

Persons responsible for an air contaminant source emitting designated hazardous air contaminants shall give utmost care and consideration to the potential harmful effects of emissions resulting from such activities. Evaluation of these facilities as to the adequacy, efficiency and emission potential will be made on an individual basis by the Technical Secretary or his designated representative. Such evaluation may require the owner or operator of a source emitting hazardous air contaminants to perform such tests as are necessary in the opinion of the Technical Secretary.

CHAPTER XII

(9.0) METHODS OF SAMPLING AND ANALYSIS

(2.0) SECTION 1 -- GENERAL

It is explicitly implied that in addition to and consistent with specific methods of sampling and analysis described herein, that samples will be taken in such number, duration and location as to be statistically significant and representative of the condition which the sample (s) purport to evaluate.

Where specific materials, equipment or procedures are specified, it shall be permissible to use other materials, equipment or procedures where it has been reliably demonstrated that their use produces results comparable to that which would have been obtained by use of the specified materials, equipment or procedures.

(9.0) SECTION 2 -- AMBIENT AIR SAMPLING AND ANALYSIS

A. PROCEDURE FOR EVALUATION OR SULFUR DIOXIDE

Sulfur dioxide shall be determined by the "Pararosaniline Method". Sulfur dioxide is absorbed from air in a solution of potassium tetrachloromecurate. A dichlorosulfitomercurate complex, which resists oxidation by the oxygen in the air is formed. The complex is reacted with pararosaniline and formaldehyde to form intensely colored pararosaniline methyl sulfonic acid. The absorbance of the solution is measured spectrophotometrically.

ACCEPTABLE EQUIVALENT METHODS ARE:

1. Gas Chromatographic Separation - Flame Photometric detection (Provided Teflon is used throughout the instrument system in parts exposed to the air stream).

2. Flame photometric detection (provided interfering compounds in significant quantities are removed).

3. Coulometric detection (provided oxidizing and reducing interferences such as O_3, NO_2, and H_2S are removed).

4. Automated Pararosaniline Procedure

5. Other methods provided specifications of Table 1 are met. The pararosaniline method, the referee method, is described in the Federal Register, Volume 36, Number 84, Friday, April 30, 1971, in Appendix A.

B. PROCEDURE FOR MEASURING SOILING INDEX

Air is drawn through Whatman No. 4 paper at an average face velocity of about 45 feet per minute. The increase in opacity density of the paper due to deposit of particulate is measured by light transmission and reported as COH unit per 1000 linear feet of air passed through the filter. By definition one COH unit is equal to 100 times the optical density. Sampling time should be selected so that for significant soiling the percent light transmission through the test spot will be between 50 and 90 percent of that through the clean paper.

The sample probe inlet should be protected to prevent entry of rain and located at least 10 feet above ground level.

C. PROCEDURE FOR MEASURING SUSPENDED PARTICULATES

The reference method for the determination of suspended particulates is the high volume method. Particulates having a size range of 0.1 to 100 microns in diameter are collected by drawing air through a weighted glass-fiber filter. The glass-fiber filter is allowed to equilibrate in a humidity controlled atmosphere and the filter is reweighed. From the weight of particulate, the sampling time and the flow-rate which is usually between 40 and 60 ft^3/min., the particulate concentration in micrograms per cubic meter may be calculated. The sampling period is usually 24 hours or for a period representative of a 24 hour period.

The reference method is given in the *Federal Register*, Volume 26, Number 84 - Friday, April 30, 1971, Appendix B.

D. PROCEDURE FOR EVALUATING ATMOSPHERIC FLUORIDES

The standard procedure for determination of atmospheric fluorides shall conform to that adopted by the American Society for Testing Materials in 1958 and bearing ASTM designation D1606-58T. Distillation and titration procedures are based on those originally described by H. H. Willard and O. B. Winter in *Industrial and Engineering Chemistry*, Analytical Edition, Volume 5, Page 7 (1933).

E. PROCEDURE FOR MEASURING NITROGEN DIOXIDE

The reference method for the determination of nitrogen dioxide in the atmosphere is the 24 hour Jacobs-Hochheiser

Sampling Method. It is described in the Federal Register, Volume 36, Number 84 - Friday, April 30, 1971.

This method uses sodium hydroxide as the absorbing reagent and sulfanilamide as the color producing agent.

The frit porosity of the bubblers used in this procedure is critical. Therefore, it is essential that the collection efficiency of each individual bubbler be determined in order that accurate results may be obtained.

F. PROCEDURE FOR DETERMINING PHOTOCHEMICAL OXIDANTS

The reference method for determining photochemical oxidants corrected for interferences due to nitrogen oxides and sulfur dioxide is by gas phase chemiluminesence. This method is described in Federal Register, Volume 36, Number 84, Friday, April 30, 1971, Appendix D.

EQUIVALENT METHODS ARE:

1. Potassium Iodide Colorimetric Detection provided correction is made for SO_2 and NO_2.
2. UV Photometric Detection of Ozone provided compensation is made for interfering substances.
3. Chemiluminesence Methods differing from that of the reference method.
4. Other methods provided the specifications in Table 1 are met.

G. PROCEDURE FOR MEASURING CARBON MONOXIDE

The reference method for the continuous measurement of carbon monoxide in the atmosphere is by non-dispersive infrared spectrophotometry. This method is described in the Federal Register, Volume 36, Number 84, Friday, April 30, 1971, Appendix C.

EQUIVALENT METHODS ARE:

1. Gas Chromatographic Separation - Catalytic Conversion - Flame Ionization Detection.
2. Other methods provided the specifications in Table 1 are met.

H. PROCEDURE FOR MEASURING HYDROCARBONS

The reference method for determining hydrocarbons corrected for methane is by chromatographic separation - catalytic conversion and flame ionization detection. This method is described in Appendix E of *Federal Register*, Volume 36, Number 84, dated April 30, 1971.

TABLE I

PERFORMANCE SPECIFICATIONS OF INSTRUMENTATION FOR USE IN AMBIENT AIR MONITORING

Specification	Air Contaminant		
	Sulfur Dioxide	Carbon Monoxide	Photochemical Oxidant (corrected NO_2 & SO_2)
Range	0-2, 620ug/m^3 (0-1ppm)	0-58mg/m^3 (0-50ppm)	0-880ug/m^3 (0-0.5ppm)
Minimum Detectable Sensitivity	26 ug/m^3 (0-0.01 ppm)	0.6 mg/m^3 (0.5ppm)	20ug/m^3 (0.01ppm)
Rise Time, 90%	5 minutes	5 minutes	5 minutes
Fall Time, 90%	5 minutes	5 minutes	5 minutes
Zero Drift	± 1% per day & ± 2% per 3 days	± 1% per day & ± 2% per 3 days	± 1% per day ± 2% per 3 days
Span Drift	± 1% per day & ± 2% per 3 days	± 1% per day & ± 2% per 3 days	± 1% per day ± 2% per 3 days
Precision	± 2%	± 4%	± 4%
Operation Period	3 days	3 days	3 days
Noise	± 0.5% (full scale)	± 0.5% (full scale)	± 0.5% (full scale)
Interference Equivalent	26 ug/m^3 (0.01ppm)	1.1 mg/m^3 (1ppm)	20 ug/m^3 (.01ppm)
Operating Temp. Fluctuation	± 5° C	± 5° C	± 5° C
Linearity	2% (full scale)	2% (full scale)	2% (full scale)

The various specifications are defined as follows:

Range: The minimum and maximum measurement limits.

Minimum detectable sensitivity: The smallest amount of input concentration which can be detected as con-concentration approaches zero.

Rise time 90 percent: The interval between initial response time and time to 90 percent response after a step increase in inlet concentrations.

Fall time 90 percent: The interval between initial response time and time to 90 percent response after a step decrease in the inlet concentration.

Zero drift: The change in instrument output over a stated time period of unadjusted continuous operation, when the input concentration is zero.

Span drift: The change in instrument output over a stated period of unadjusted continuous operation, when the input concentration is a stated upscale value.

Precision: The degree of agreement between repeated measurements of the same concentration (which shall be the midpoint of the stated range) expressed as the averge deviation of the single results from the mean.

Operation period: The period of time over which the instrument can be expected to operate unattended within specifications.

Noise: Spontaneous deviations from a mean output not caused by input concentration changes.

Interference equivalent: The portion of indicated concentration due to the total of the interferences commonly found in ambient air.

Operation temperature fluctuation: The ambient temperature fluctuation over which stated specifications will be met.

Linearity: The maximum deviation between an actual instrument reading and the reading predicted by a straight line drawn between upper and lower calibration points.

(9.0) SECTION 3 -- SOURCE SAMPLING AND ANALYSIS

The methods set forth in this section shall be applicable for determining compliance with emission standards.

A. SAMPLE AND VELOCITY TRAVERSES

Sample and velocity traverses shall be determined by the method outlined in the Federal Register, Volume 36, Number 247, December 23, 1971, with this added condition: "If traverse readings are within plus or minus 10% of average; 1, 2 or 3 points (corrected to average) may be used in subsequent tests. One test in 3 must be a traverse."

B. STACK GAS VELOCITY DETERMINATION

Determination of Stack Gas Velocity (Type S Pitot Tube) shall be determined by the method outlined in the Federal Register, Volume 36, Number 247, December 23, 1971, except in such instances where a Type S Pitot Tube is not applicable.

C. GAS ANALYSIS

Gas analysis for carbon dioxide, excess air and dry molecular weight shall be accomplished by the method outlined in the Federal Register, Volume 36, Number 247, December 23, 1971, or another type of test procedure that is direct indicating and/or recording approved by the Technical Secretary.

D. DETERMINATION OF MOISTURE IN STACK GASES

Moisture shall be determined by the condenser method as specified in the Federal Register, Volume 36, Number 247, December 23, 1971, or other technique approved by the Technical Secretary.

E. DETERMINATION OF PARTICULATE EMISSIONS

The basic design of the sampling train is left to the individual if certain criteria are observed to assure high collection efficiency and standard analysis of the collected particulates.

1. DESCRIPTION OF SAMPLING APPARATUS

a. This apparatus shall include interchangable sampling nozzles or probes, of various diameters, a filter effective for the removal of particles exceeding 0.3 micron diameter of solid or liquid, a suitable number of impingers to reduce condensible vapors to liquid or solid particulate matter, and appropriate connecting tubing at temperatures above the aqueous dewpoint of the gases. All materials of construction shall be resistant to corrosive elements in the flue gases, e.g., SO_2, NO_x, and elevated temperatures.

b. This filter assembly shall be maintained above the aqueous dewpoint of the flue gases throughout the sampling operation. To accomplish this the filter assembly may be disposed inside the gas flue to be completely bathed by the hot gas stream; or it may be disposed outside the gas stream provided the following precautions are taken:

   (1) If the filter is disposed outside the hot gas flue, a temperature indicator, e.g., thermocouple, shall be provided at the sample filter gas exit to monitor the filter temperature above the aqueous dewpoint of the flue gases at all times. Auxiliary heating elements for tubing and filter holder shall be provided to maintain specified temperatures when required.

   (2) Deposits in the tube connecting the probe to the exterior filter shall be quantitatively removed by washing with a suitable liquid and by brushing, the weight of solids recovered therefrom being added to the weight found in the filter.

c. Provisions shall be included for cooling the gas stream to standard conditions (70° F) to reduce condensible vapors to liquid or solid particulate matter, and for cooling the condensed particles including water that may be formed by condensation of water vapor in the sample. This shall be accomplished by passage through bubblers provided with an orifice submerged in water through which the gas stream passes at a velocity of approximately 100 meters per second. The bubblers should be immersed in an ice bath to minimize evaporation. A trap of suitable shape and dimensions for the collection of overflow or overspray shall be provided downstream from the bubblers.

d. An indicating flowmeter shall be provided and preferably located in the train at a point preceding the source of suction, preceded by a trap to prevent condensed water from entering the flowmeter; and a vacuum gauge adjacent to the flow meter to indicate the absolute pressure of the gas passing through the orifice meter.

e. Operation charts comprising either graphs or tables shall be prepared and be available as a part of the apparatus, to indicate proper sampling rates as a function of gas density in the stack and at the flowmeter.

2. ANALYTICAL RESULTS

Analytical results shall be accomplished as outlined in the appendix of the Federal Register, Volume 36, Number 247, December 23, 1971 for the filter catch and washings up to the filter. Inclusion or exclusion of material collected in the impinger train as "particulate matter" and method of analysis will be determined on an individual air contaminant source basis.

3. EQUIVALENT METHODS

Those procedures demonstrated to yield equivalent results and approved by the Technical Secretary may be used for sampling and analysis of particulate matter. Stack sampling methods promulgated by the Environmental Protection Agency for specified air contaminant sources are considered to be equivalent methods and therefore acceptable.

F. MEASUREMENT OF SULFUR DIOXIDE IN STACK GASES

1. The approved procesures for measuring Sulfur Dioxide in stack gases are the Shell Development Company method and the Monsanto Company method.

REFERENCE: (1) Shell Development Company Method

Atmospheric Emission from Sulfuric Acid Manufacturing Processes, Public Health Service Publication 999-AP-13 (1965), Appendix B, page 85-87.

REFERENCE: (2) Monsanto Company Method

Atmospheric Emission from Sulfuric Acid Manufacturing Processes, Public Health Service Publication 999-AP-13, (1965) Appendix B, page 63-84.

2. EQUIVALENT METHODS

Many new and improved methods of continuous gaseous monitoring in stacks are now in use. Any method of stack sampling approved by the Technical Secretary may be used in accordance with good professional practice. Stack sampling methods promulgated by the Environmental Protection Agency for specified air contaminant sources are considered to be equivalent methods and therefore acceptable.

G. MEASUREMENT OF SULFURIC ACID (H_2SO_4) IN STACK GASES

1. The approved procedures for measuring sulfuric acid (H_2SO_4) in stack gases are the Shell Development Company Method and the Monsanto Company Method.

   REFERENCE: (1) Shell Development Company Method

   Atmospheric Emission from Sulfuric Acid Manufacturing Processes, Public Health Service Publication 999-AP-13 (1965), Appendix B, pages 85-87

   REFERENCE: (2) Monsanto Company Method

   Atmospheric Emission from Sulfuric Acid Manufacturing Processes, Public Health Service Publication 999-AP-13 (1965), Appendix B, pages 63-84

2. Any method of stack sampling approved by the Technical Secretary may be used in accordance with good professional practice. The stack sampling method promulgated by the Environmental Protection Agency in the Federal Register, Volume 36, Number 247, December 23, 1971 is considered to be an equivalent method.

CHAPTER XIII

(2.0)

SEVERABILITY

The provisions of these Regulations are severable and if any part, section, subsection, clause, paragraph or phrase of these Regulations shall be adjudged to be invalid or unconstitutional by any court of competent jurisdiction, the judgment shall not affect, impair or invalidate the remainder of these Regulations, but shall be confined in its operation to the part, section, subsection, clause, paragraph or phrase of these Regulations that shall be directly involved in the controversy in which such judgment shall have been rendered.

CHAPTER XIV

(50.2) CONTROL OF SULFUR DIOXIDE EMISSIONS

(2.0) SECTION 1 -- GENERAL PROVISIONS

A. For the purpose of this Chapter, each county in Tennessee will be classified by the Board into one of six categories, defined as Class I, Class II, Class III, Class IV, Class V, and Class VI.

Each class has been established with the essential limit necessary to attain and/or maintain ambient air quality standards based on measured and predicted air quality.

B. The county classifications are as follows:

Class I - Polk
Class II - Humphreys, Maury, Roane
Class III - Sullivan
Class IV - Shelby
Class V - Anderson, Davidson, Hamilton, Hawkins, Knox, Rhea
Class VI - All other counties.

(51.6) SECTION 2 -- NON-PROCESS EMISSION STANDARDS

A. Fuel Burning Installation in Operation Prior to April 3, 1972.

1. The owner or operator of a fuel burning installation shall not cause, suffer, allow or permit the emissions from that source of sulfur dioxide in excess of that contained in Table 1:

TABLE 1

ALLOWABLE SO_2 EMISSIONS FOR FUEL BURNING INSTALLATIONS IN TERMS OF POUNDS PER MILLION BTU/HR HEAT INPUT
(one Hour Average)

Rated Capacity	Class I	Class II	Class III	Class V	Class VI
greater than 1000 x 10^6 BTU/hr.	1.2	1.2	2.4	4.0	5.0
Less than 1000 x 10^6 BTU/hr.	1.6	5.0	2.4	4.0	5.0

2. The owner or operator of a fuel burning installation in a Class IV County shall not cause, suffer, allow or permit emissions from that source of sulfur dioxide in excess of those listed in Table 2 or the following equation:

TABLE 2

FUEL	EMISSION LIMIT (one hour average)
Coal	4.0 lbs $SO_2/10^6$ BTU
No 5 and No 6 fuel oil and solid fuels other than coal	2.7 lbs $SO_2/10^6$ BTU
All other fuels	0.5 lbs $SO_2/10^6$ BTU

$$Q_{SO_2} = \frac{4.0X + 2.7Y + 0.5Z}{X+Y+Z}$$

Q_{SO_2} = Allowable Sulfur Dioxide Emissions in lbs $SO_2/10^6$ BTU

X = heat input from coal

Y = heat input from #5 or #6 fuel oil and solid fuels other than coal

Z = heat input from all other fuel

3. In addition to the requirements of subparagraphs 1 and 2, every owner or operator of a fuel burning installation having a toal rated capacity greater than 1000 million BTU per hour shall:

   a. emonstrate, to the satisfaction of the Technical ecretary, that the sulfur dioxide emitted, either lone or in contribution to other sources, will not nterfere with attainment and maintenance of any rimary or secondary ambient air quality standard.

   b. nstall and maintain air quality sensors to monitor ttainment and maintenance of ambient air quality standards in the areas influenced by the emissions from uch installation. Such shall be done in a manner rescribed by the Technical Secretary. Results of uch monitoring shall be provided to the Technical ecretary in a manner and form as he shall direct.

4. For urpose of this part, the total heat input (based on maximum rated capacity) from all fuel combustion units at a pint, premises or installation shall be used for determining the aximum allowable emission of sulfur dioxide that passes

through a stack or stacks. The heat valve of the fuel that is not released within the fuel burning equipment shall not be considered as part of the heat input to the fuel burning installation.

B. Fuel Burning Equipment Constructed After April 3, 1972.

1. Fuel burning equipment with a rated capacity of 250 million BTU per hour or less heat input, shall not cause, suffer, allow or permit the emission of sulfur dioxide in excess of 1.6 pounds per million BTU heat input (one hour average) in a Class I County, 2.4 pounds in a Class III County, 4.0 pounds in a Class IV and V Counties, nor in excess of 5.0 pounds per million BTU heat input (one hour average) in a Class II or VI County.

2. The owner or operator of a fuel burning equipment with a rated capacity greater than 250 million BTU per hour heat input shall not cause, suffer, allow or permit the emissions from that source of sulfur dioxide in excess of the following:

   a. .80 lbs per million BTU heat input, maximum 1 hour average, when solid fossil fuel is burned.

   b. 1.2 lbs per million BTU heat input, maximum 1 hour average, when solid fossil fuel is burned.

   c. Where different fossil fuels are burned simultaneously in any combination, the applicable standard shall be determined by proration. Compliance shall be determined by using the following formula:

$$\frac{\underline{Y\ (0.80) + Z\ (1.2)}}{Y + Z}$$

Where:

Y is the percent of total heat input derived from liquid fossil fuel and,

Z is the percent of total heat input derived from solid fossil fuel.

(50.1.1)SECTION 3 -- PROCESS EMISSION STANDARDS

A. On or after July 1, 1975, the owner or operator of an air contaminant source located in a Class I county shall not cause, suffer, allow or permit the emission from that source of sulfur oxides (calculated as sulfur dioxide) in excess of 500 parts per million, 0.05 percent by volume, dry basis (one hour average).

B. On or after July 1, 1975, the owner or operator of an air contaminant source located in a Class II and Class III county shall not cause, suffer, allow or permit the emission from that source of sulfur dioxide in excess of 1000 parts per million, 0.10 percent by volume, dry basis (one hour average).

C. On and after July 1, 1975, the owner or operator of an air contaminant source located in a Class IV, V or VI county shall not cause, suffer, allow or permit the emission from that source of sulfur dioxide in excess of 2,000 parts per million, 0.20 percent by volume, dry basis (one hour average).

D. A process source in a Class IV county as an alternative to the standard in paragraph (C) above, may request from the Technical Secretary of the Tennessee Air Pollution Control Board to be regulated by not being allowed to exceed their sulfur dioxide emission capacity in 1974, on a twenty-four hour and an annual basis. These emissions will be specified in a Board Order, as a permit condition or other legally enforceable manner. The Technical Secretary may approve such a request after being given adequate proof that this alternate standard will not cause any air quality standards to be violated and the company has an adequate continuous air monitoring network for determining the impact of its emissions.

E. No person shall cause, suffer, allow or permit the emissions from any new air contaminant source in excess of those limits specified in Chapter XIV, Section 3, paragraph (A), (B) or (C), whichever is applicable. Regardless of the specific emission standard, new sources shall utilize the best available control technology as deemed appropriate by the Technical Secretary of the Tennessee Air Pollution Control Board.

F. In addition to the requirements of Rule 3, paragraph (A), (B), and (C), above, every owner or opreator of an existing process emission source emitting more than 1000 tons of SO_2 during the calendar year 1972 or any other calendar year thereafter shall:

1. Demonstrate, to the satisfaction of the Technical Secretary, that the sulfur oxides emitted, either alone or in contribution to other sources, will not interfere with attainment and maintenance of any primary or secondary ambient air quality standard.

2. Install and maintain air quality sensors to monitor attainment and maintenance of ambient air quality standards in the areas influenced by the emissions from such installation. Such shall be done in a manner prescribed by the Technical Secretary. Results of such monitoring shall be provided to the Technical Secretary in a manner and form as he may direct.

G. All calculations performed pursuant to demonstration required by rule 3(F), shall assume that the process emission source is operating at the maximum rated capacity.

H. For purposes of this Chapter, thermal oxidizers and incinerators shall be construed as process emission sources.

THE HAMILTON COUNTY AIR POLLUTION CONTROL

REGULATION
(AS AMENDED)

A REGULATION FOR AIR CONSERVATION AND THE PREVENTION: ABATEMENT AND CONTROL OF AIR POLLUTION: CREATING AN AIR POLLUTION CONTROL AUTHORITY AND PRESCRIBING ITS POWERS AND DUTIES: AND ESTABLISHING STANDARDS, RULES AND REGULATIONS FOR THE ABATEMENT AND CONTROL OF AIR POLLUTION AND PROVIDING PENALTIES FOR VIOLATIONS THEREOF: AND PROVIDING FOR THE ISSUANCE, SUSPENSION AND REVOCATION OF INSTALLATION PERMITS, TEMPORARY OPERATING PERMITS AND CERTIFICATES OF OPERATION: AND AUTHORIZING THE IMPOSITION AND COLLECTION OF PENALTIES AND FORFEITURES: AND REQUIRING MONITORING OF SOURCES AND MAKING EMISSION DATA AVAILABLE TO THE PUBLIC: AND PROVIDED FOR THE LICENSING OF OPERATORS OF CERTAIN TYPES OF EQUIPMENT.

WHEREAS, air pollution in all its forms is a menace to health, safety, and economy of all citizens; and

WHEREAS, preventable air pollution can be corrected or removed as a public hazard through engineering, science, equipment, research, education, and cooperation; and

WHEREAS, the excessive emissions of air contaminants are causing atmospheric pollution which must be prevented and abated to the extent necessary to prevent deleterious effect upon the public health, welfare, property, and business and requires the adoption of a comprehensive and integrated plan for air pollution control; now, therefore, the following regulations have been adopted by the County Council of Hamilton County, Tennessee.

SECTION 1

(2.0) Declaration of Policy and Purpose: Title

Section 1-A. It is hereby declared to be the public policy of this county and the purpose of this regulation to achieve and maintain such levels of air quality as will protect human health and safety and to the greatest degree practicable, prevent injury to plant and animal life and property, foster the comfort and convenience of the people.

Section 1-B. To these ends it is the purpose of this regulation to provide a program of air pollution prevention, abatement, and control.

Section 1-C. This regulation shall be known and cited as "The Hamilton County Air Pollution Control Regulation".

SECTION 2

(16.0) Air Pollution Control Board: Bureau of Air Pollution Control.

Section 2-A. Air Pollution Control Board.

1. There is hereby created the Chattanooga-Hamilton County Air Pollution Control Board, hereinafter referred to as "the Board" to be composed of ten members, three of whom are to be appointed by the County Judge and confirmed by the County Council; three of whom are to be appointed by the Mayor of the City of Chattanooga, and confirmed by the City Commission; three of whom are to be appointed jointly by the county Judge and the Mayor and confirmed by both the City Council and the City Commission. The terms of members shall be four years except that of the initially appointed members, one from each of the above categories shall serve for two years, and one from each shall serve for three years, and one from each shall serve for four years as designated at the time of appointment. Whenever a vacancy occurs, the vacancy shall be filled for the unexpired term in the same manner as the original appointment. The Director the Chattanooga-Hamilton County Health Department or his designated representative shall be an ex-officio voting member, provided, however, that if the Director of the Chattagoona-Hamilton County Health Department desires to designate a representative such designation shall be made on an annual basis and in writing prior to June 30th of each year and such designated representative shall serve as the ex-officio member in the place of the Director of the Chattagoona-Hamilton County Health Department. Provided further, that should the designated representative resign or otherwise terminate his employment with the Chattagoona-Hamilton County Health Department such shall terminate his appointment to, and service upon the Board.

2. The members of the Board shall have the following qualifications: They shall be residents of the metropolitan area of Chattanooga, Tennessee, residing within Hamilton County, Tennessee, or Walker County, Georgia, Industry may have no more than three members active or retired, of whom no more than one shall be from any major two-digit grouping as defined by the Standard Industrial Classification Manual of the United States Department of Commerce. The Chairman of the Board shall have the right to vote on all matters. Members shall be selected for merit without regards to political affiliation; the Mayor and Judge in their appointments shall select persons for their ability and all appointments shall be of such nature as to aid the work of the Board, to inspire the highest degree of confidence and cooperation in furthering the policy of this regulation.

3. The Board shall select annually a Chairman, Vice-Chairman and Secretary from among its members as officers; each officer shall have the right to vote on all matters, and shall hold office until the expiration of the term for which elected and thereafter until his successor has been elected. The Board shall hold at least four regular meetings each

year and such additional meetings as the chairman deems desirable, at a place within this County and time to be set by the Chairman. Special meetings shall be called by the Chairman upon written request of any four members. Six members shall constitute a quorum.

4. All members of the Board shall service without compensation but shall receive their actual expenses incurred in attending meetings of the Board and the performance of any duties as members or by direction of the Board.

5. The Board may employ and discharge such employees and consultants as may be necessary for the administration of this regulation with the approval of the Mayor, County Judge and Chairman of the Board or with the approval of any two of said officials. Subject to any applicable restrictions contained in law, all departments and agencies of the County shall, upon request, assist the Board in the performance of its duties, with or without charge. The Board may conpensate such other agencies for services.

Section 2-B. Bureau of Air Pollution Control.

There is hereby created a Bureau of Air Pollution Control, hereinafter referred to as "the Bureau," which shall be headed by a director appointed by the Board, subject to the approval of the Mayor, County Judge and Chairman of the Board or with the approval of any two of said officials. The Bureau shall administer this regulation under the overall supervision of the Board, and shall provide, by rules consistent wit law, for the performance by the officers and employees of any act or duty necessary or incidental to the administration of this regulation.

Section 2-C.

Persons responsible for compliance with this regulation and who are liable for violation of this regulation shall include, but not necessarily be limited to, all persons owning, occupying, operating, in charge of or in control of any premises, equipment, installations or operations from which or as a result of which any violation of this regulation shall occur whether such persons be proprietor, owner, lessee, tenant, manager, operator or in charge of such premises, equipment, installations or operations, and further any of the foregoing who having a reasonable opportunity to do so should fail to take all reasonable and necessary steps to terminate or abate any condition or operation which causes or from which arises a violation of this regulation shall be deemed to be in violation of this regulation. Any one or more of the foregoing persons shall be held individually and jointly responsible for compliance herewith and shall be jointly and severally liable for violation hereof.

SECTION 3

(16.0) Powers and Duties of the Board: Delegation

Section 3-A. In addition to any other powers otherwise conferred upon it by law, the Board shall have power to:

1. Recommend from time to time to the County Council that it adopt, promulgate, amend, and repeal provisions of this regulation; provided, however, that prior to making such recommendations a public hearing shall be held on such proposed changes with adequate advance public notice of such hearing.

2. Hold hearings relating to any aspect of or matter in the administration of this regulation.

3. Make such determinations and issue such orders as may be necessary to effectuate the purposes of this regulation and enforce the same by all appropriate administrative and judical proceedings.

4. Retain, employ, provide for, and compensate, within appropriations available therefore, such consultants, assistants, deputies, clerks, and other employees including legal counsel, on a full or part-time basis as may be necessary to carry out the provisions of this regulation and prescribe the times at which they shall be appointed and their powers and duties consistent with Section 2-A of this regulation.

5. Through its Bureau, determine by means of field studies and sampling the degree of air contamination and air pollution in the County and various areas therein.

6. Recommend ambient air quality standards for the County.

7. Hold hearings upon appeals from orders of the Director, or from the grant or denial of the Director, or permits, or from any other actions or determinations of the Director hereunder for which provision is made for appeal.

8. Institute in the name of the County in the Circuit Court or the Chancery Court of Hamilton County, Tennessee, legal proceedings to compel compliance with any final order or determination entered by the Board or the Director.

9. Settle or compromise in its discretion, with the approval of the County attorney, as it may deem advantageous to the County and in keeping with the purpose and spirit of this regulation, any suit for recovery of any penalty or from compelling compliance with the provisions of any rule or regulation issued hereunder or for compelling compliance with any order or determination entered by the Board or the Director.

10. Require access to records relating to emissions which cause or contribute to air contamination.

11. Issue, suspend and revoke installation permits, temporary operating permits and certificates of operation and other permits and licenses provided for in this regulation.

12. To provide for forfeitures and penalties for any breach of this regulation, such forfeitures and penalties to be imposed upon a violator only after hearing, or opportunity for hearing, before the Board and to provide for forfeitures and penalties upon failure of a violator of this regulation to comply with any order of the Board, and to bring legal actions in the name of the County in the appropriate court for the collection of such penlty or forfeiture.

Section 3-B. The Board shall have the following duties with respect to the prevention, abatement, and control of air pollution:

1. Prepare and develop a comprehensive plan or plans for the prevention, abatement, and control of air pollution in this County and report annnually to the County Judge and County Council of Hamilton County on progress being made toward the prevention, abatement, and control of air pollution.

2. Encourage voluntary cooperation by persons and affected groups to achieve the purposes of this regulation.

3. Encourage and conduct studies, investigations, and research relating to air contamination and air pollution and their causes, effects, prevention, abatement and control.

4. Collect and disseminate information and conduct educational and training programs relating to air contamination and air pollution.

5. Advise, consult, contract, and cooperate with other agencies of th State and this County, other local governments, industries, other States, interstate or interlocal agencies, and the Federal Government, and with interested persons or groups.

6. Accept, receive, and administer grants or other funds or gifts from public or private agencies, including the State and Federal Governments, for the purpose of carrying out any of the functions of this regulation. Such funds received by the Board pursuant to this subdivision shall be deposited with the City of Chattanooga Treasurer and or Hamilton County and held and disbursed by said office in accordance with regulations of the Board. The Board is authorized to promulgate such rules of the conduct of its business and as it may deem necessary for carrying out the provisions of this regulation.

Section 3-C. The Board may delegate to the Director, and through him to the personnel of the Bureau, any powers conferred upon the Board by this section with the exceptions of those enumerated in subsections 1, 4, 6, 7, and 9 of subsection A of this section. The Board may request the assistance of the Director and the Bureau in the discharge of the duties enumerated in subsection B of this section but shall not be relieved thereby of the ultimate responsibility for their fulfillment.

SECTION 4

(15.0) Enforcement: Procedure for Adjudicatory Hearings

(16.0)

Section 4-A. Whenever the Board or Director has reason to believe that a violation of any provision of this regulation or rule pursuant thereto has occurred, the Board or Director may cause written notice to be served upon the alleged violator or violators. The notice shall specify the provision of this regulation or rule alleged to be violated and the date, time, place, and general nature of the alleged violation or violations thereof and may include an order that necessary corrective action be taken within a reasonable time. The notice herein provided for may be served by the Sheriff or a Deputy Sheriff of Hamilton County, Tennessee; or by a special deputy sheriff; or may be served in any other manner prescribed for the service of a writ or summons by the statutes of the State of Tennessee. Any such order shall become final unless, no later than thirty days after the date of notice and order are served the person or persons named therein request in writing a hearing before the Board. Upon such request, the Board shall hold a hearing. In lieu of an order, the Board may require that the alleged violator or violators appear before the Board for a hearing at a time and place specified in the notice and answer the charges complained of, or the Board may initiate action pursuant to Section 18 or Section 19 of this regulation, or the Board may initiate action pursuant to any applicable provisions of the statutes of the State of Tennessee, or the Acts of Congress of the United States, or the Board may initiate action pursuant to any provisions or doctrines of the law of Tennessee.

Section 4-B. If, after a hearing held purusant to subsection A of this section, the Board finds that a violation or violations have occurred, it shall affirm or modify the order previously issued, or issue an appropriate order or orders for the prevention, abatement, or control of the emissions involved or for the taking of such other corrective action as may be appropriate. If, after hearing on an order contained in a notice the Board finds that no violation has occurred, it shall rescind the order. Any order issued as part of a notice or after hearing may prescribe the date or dates by which the violation or violations shall cease and may prescribe timetables for necessary actions in preventing, abating, or controlling the emissions. All action taken by the Board under this section shall be approved in writing by the chairman, vice-chairman or chairman pro tem. of the Board.

Section 4-C. Nothing in this regulation shall prevent the Board or Director from making efforts to obtain voluntary compliance through warning, conference, or any other appropriate means. Nothing in this regulation, or in this section of this regulation, shall be construed as requiring a hearing pursuant to this section of this regulation prior to or as prerequisite to the institution of action pursuant to any other section of this regulation or pursuant to the statutes of the State of Tennessee, the Acts of Congress of the United States, or any applicable doctrine of the law of the State of Tennessee; and nothing in this regulation or this section of this regulation shall prevent the Board or Director from suspending or revoking an installation permit or a temporary operating permit or any other permit or license issued pursuant to the provisions of this regulation, but notice shall be served pursuant to this section of this regulation prior to revocation of a valid and outstanding certificate of operation.

SECTION 5

(5.0) Variances

Section 5-A. Any person who owns or is in control of any plant, building, structure, process or equipment may apply to the Board for a variance from rules or regulations. The Board may grant such variance if it finds that:

1. The emissions occurring or proposed to occur do not endanger or are not likely to endanger human health or safety; and

2. Compliance with the rules or regulations from which variance is sought would produce serious hardship without equal or greater benefits to the public.

Section 5-B. No variance shall be granted pursuant to this section except after public hearing on due notice by publication in a newspaper of general circulation and until the Board has considered the relative interests of the applicant, other owners or property likely to be affected by the discharges, and the general public.

Section 5-C. Any variance or renewal thereof may be granted within the requirements of subsection 5-A and for the time periods and under conditions consistent with the reasons therefor and with the following limitations:

1. If the variance is granted on the ground that there is not practicable means known or available for the adequate prevention, abatement, or control of the air pollution involved, it shall be only until the necessary means for prevention, abatement, or control becomes known and available and subject to the taking of any substitute or alternate measures that the Board may prescribe.

2. If the variance is granted on the ground that compliance with the particular requirement or requirements from which variance is sought will necessitate the taking of measures which, because of their extent or cost, must be spread over a considerable period of time, it shall be for a period not to exceed such reasonable time as, in the view of the Board is requisite for the taking of the necessary measures. A variance granted on the ground specified herein shall contain a timetable for the taking of action in an expeditious manner and shall be conditioned on adherence to such timetable.

3. If the variance is granted on the ground that it is justified to relieve or prevent hardship of any kind other than provided for in items 1 and 2 of this subsection, it shall be for not more than one year.

Section 5-D. Any variance granted pursuant to this section may be renewed on terms and conditions and for periods which would be appropriate on initial granting of a variance. If complaint is made to the Board on account of the variance, no renewal thereof shall be granted, unless, following public hearing on the complaint notice, the Board finds that renewal is justified. No renewal shall be granted except on application therefor. Any such application shall be made at least thirty (30) days prior to the expiration of the variance. Immediately upon receipt of an application for renewal, the Board shall give public notice of such application in accordance with rules and regulations of the Board.

Section 5-E. A variance or renewal shall not be a right of the applicant or holder thereof but shall be in the discretion of the Board. However, any person adversely affected by a variance or renewal granted by the Board may obtain judicial review thereof by a proceeding in the Chancery Court. Judicial review of the denial of a variance may be had only on common law writ of certiorari on the ground that the denial is arbitrary or capricious.

Section 5-F. Nothing in this section and no variance or renewal granted pursuant hereto shall be construed to prevent or limit the application of the emergency provisions and procedures of Section 6 of this regulation to any person or his property.

Section 5-G. Any hearing held under the provisions of this section shall conform with the relevent requirements set out in Section 7 of this requlation.

SECTION 6

(8.0) Emergencies

Any other provisions of law to the contrary notwithstanding, if the Director and/or the Director of the Chattagoona-Hamilton County Health

Department finds that a condition of air pollution exists or is likely to exist, and that it creates an emergency requiring immediate action to protect human health or safety, the County Judge with the concurrence of the Director and/or the Director of the Chattanooga and Hamilton County Health Department, shall order persons causing or contributing to the air pollution to reduce or discontinue immediately the emission of air contaminants. Upon issuance of any such order, the Director shall fix a place and time, not later than 24 hours thereafter, for a hearing to be held before the Board. Not more than 24 hours after the commencement of such hearing, and without adjournment thereof, the Board shall affirm, modify, or recommend to the County Judge that the order be affirmed, modified, or set aside.

SECTION 7

(16.0) Hearings and Judicial Review

Section 7-A. At any public hearing all testimony taken before the Board shall be under oath and recorded stenographically, but the record shall not be transcribed unless any party desires to appeal from any order or determination of the Board, and in such event the appearling party shall pay for the transcription and reimburse the Board its stenographic expense incident to the hearing.

Section 7-B. The Chairman, Vice-Chairman, or Chairman pro tem. of the Board or the Director may issue notice for the hearing and may issue subpoenas requiring attendance and testimony of witnesses and/or the production of evidence relevant to any matter involved in such hearing. Said subpoena shall be served in the same manner as is provided for service of notice in Section 4. The Director shall issue subpoenas requested by a person upon whom notice has been served to appear for a hearing or who otherwise has a real and substantial interest in the hearing. The Chairman, Vice-Chairman or Chairman pro tem. or Director is authorized to administer oaths and to examine witnessess. Witnesses may likewise be examined by any member of the Board, the County Attorney, the attorney representing the Board, the attorney presenting proof from the Bureau, the applicant for variance or his attorney, an alleged violator or his attorney, or any other person determined by the Board to have a real and substantial interest in the hearing or his attorney. In case of a refusal to obey a subpoena under this regulation, upon approval of a majority of the members of the Board conducting the hearing, application may be made to any State court of record for such necessary orders or other proceedings to compel the attendance and testimony of said witness or witnesses and/or to compel the production of such evidence. Upon application to a State court of record the Court may issue such order and failure to appear before the Board or produce evidence will be deemed to be contempt of the court from which such order has issued. Failure to obey the order shall be punishable as provided by ordinances, state statutes or the common law for failure to obey a subpoena issued for appearance of a witness before such court.

Section 7-C. All hearings shall be held before not less than a majority of the Board.

Section 7-D. Nothing in this section shall be construed to require a hearing prior to the issuance of an emergency order pursuant to Section 6 of this regulation or prior to the institution of action pursuant to any other section or provision of this regulation or the statutes of the State of Tennessee, the Acts of Congress of the United States, or any applicable doctrine of the law of the State of Tennessee.

Section 7-E. Any person aggrieved by any order or determination of the Director may appeal said order or determination to the Board and may request a public hearing before the Board pursuant to the provisions of this Section 7. Notice of appeal and a bond in the amount of $250.00 to secure costs of the hearing shall be filed in the Bureau within 30 days after the date of the final order or determination from which appeal is sought. The filing of the notice of appeal and bond herein provided for within the time herein prescribed shall perfect the appeal to the Board. Upon receipt of said notice of appeal and bond, the Director shall immediately notify the Chairman, Vice-Chairman or Chairman pro tem. of the Board of the appeal. The hearing on appeal to the Board may be had at a special meeting of the Board called by the Chairman, Vice-Chairman or Chairman pro tem. or at a regular meeting. The perfecting of the appeal as herein provided shall suspend the operation of the order or determination appealed from until such time as the Board has acted upon the appeal. Any person aggrieved by any final order or determination of the Board hereunder shall have judicial review thereof by common law writ of certiorari. No judicial review shall be available until and after all administrative remedies have been exhausted.

SECTION 8

(13.0) (14.0) Confidentiality of Certain Records

Any records or other information of a confidential nature voluntarily furnished to the Board by the owner or operator concerning one or more air contaminant sources which records or information as certified by the owner or operator relate to confidential productions or sales figures or to processes or productions unique to the owner or operator or which would affect adversely the competitive position of such owner or operator if made available to the general public shall be only for the confidential use of the Board in the administration of this regulation, unless such owner or operator shall expressly agree to the publication or availability to the general public, provided, however, that no such records or information shall be considered as of a confidential nature unless accepted in writing by the Board as confidential. Nothing herein shall be construed to prevent the use of such records or information by the Board in compiling or publishing analyses or summaries relating to the general conditions of the outdoor atmosphere provided that such analyses or summaries do not identify any owner or operator or reveal any information considered confidential under this section. Notwithstanding the foregoing, neither the composition of air contaminants nor emission data shall be considered confidential under this section.

SECTION 9

(2.0) Rules, Regulations, Criteria, and Standards

Be it further resolved by the County Council of Hamilton County, Tennessee, that the following rules, regulations, criteria, and standards for air pollution control are hereby adopted:

(2.0) Rule 1 — Title

These regulations shall hereafter be known and referred to as the "Chattanooga-Hamilton County Air Pollution Control Regulations."

(50.3) Rule 2 — Regulation of Nitrogen Oxides

Rule 2.1. No person shall cause, suffer, allow or permit the emission of nitrogen oxides, expressed as nitrogen dioxide, from fuel burning equipment built or installed on and after the 1st day of January, 1973, in excess of the following:

a. 165 ppm corrected to 15 percent excess air when gaseous fossil fuel is fired (equivalent to 0.20 pounds of nitrogen oxides, expressed as nitrogen dioxide, per million BTU heat input).

b. 227 ppm corrected to 15 percent excess air when liquid fossil fuel is fired (equivalent to 0.30 pounds of nitrogen oxides, expressed as nitrogen dioxide, per million BTU heat input).

c. 525 ppm corrected to 15 percent excess air when solid fossil fuel is fired (equivalent to 0.70 pounds of nitrogen oxides, expressed as nitrogen dioxide, per million BTU heat input).

When different fossil fuels are burned simultaneously in any combination, the applicable standard shall be determined by proration (i.e. the allowable emission, expressed as nitrogen dioxide, shall be equal to the value obtained from the equation: $A = S \times (525) + L \times (227) + G \times (165)$ where

S = fraction of total heat input derived from solid fossil fuel

L = fraction of total heat input derived from liquid fossil fuel

G = fraction of total heat input derived from gaseous fossil fuel

A = The emission limit in ppm

Rule 2.2. On and after the 1st day of July, 1975, no person shall cause, suffer, allow or permit the emission of nitrogen oxides from any nitric acid plant in being before the 1st day of January, 1973, in excess of 5.5 pounds (calculated as nitrogen dioxide) per ton of acid produced.

Rule 2.3. No person shall cause, suffer, allow or permit the emission of nitrogen oxides from any nitric acid plant build or installed on and after the 1st of January, 1973, in excess of 3 pounds (calculated as nitrogen dioxide) per ton of acid produced.

Rule 2.4. All sampling of emissions from any source of nitrogen oxides and all analyses of samples to determine the amount of nitrogen oxides in such samples shall be conducted as specified by techniques promulgated by the Board.

(50.1.2) Rule 3 — Visible Emission Regulations

Rule 3.1. No person shall cause, suffer, allow or permit discharge of a visible emission from any new air contaminant source with a density greater than number one (1) of the Ringelmann Chart or an opacity in excess of twenty (20) percent for an aggregate of more than five (5) minutes in any one (1) hour or more than twenty (20) minutes in any twenty-four (24) hour period.

Rule 3.2. No person shall cause, suffer, allow or permit discharge of a visible emission from any existing air contaminant source with a density equal to or greater than number two (2) of the Ringelmann Chart or an opacity equal to or in excess of forty (40) percent for more than five (5) minutes in any one (1) hour or in aggregate of more than twenty (20) minutes in any twenty-four (24) hour period.

Rule 3.3. On and after the 1st day of July, 1974, the provisions of Rule 3.2 above stated shall no longer be applicable and all air contaminant sources shall be construed as new sources for the purpose of Rule 3 of this regulation and shall be required to meet those standards set forth in Rule 3.1 above stated.

Rule 3.4. Due allowance shall be made for visible emissions in excess of that permitted in Rule 3.1 and Rule 3.2 of this regulation which are necessary or unavoidable due to start-up, breakdown or upset conditions provided the owner or operator shall maintain a running, current log of such start-up, breakdown or upset condition showing the time at which such condition began and ended and that such record shall be available to the Director or his representative upon request. For those operations subject to a permit it shall be permissible to omit the record of start-up conditions not in compliance with Rule 3.1 and Rule 3.2 when such start-up condition has previously been made a part of the permit.

Rule 3.5. It is expressly intended that in testing compliance with Rule 3.1 and Rule 3.2 that visible emissions tending to produce a black plume will be evaluated in terms of the Ringelmann Chart scale and that visible emission tending to produce a non-black plume will be evaluated in terms of equivalent opacity and expressed as percent opacity.

Rule 3.6. Visible emissions from fuel-burning equipment used exclusively to provide space heating in a building containing not more two (2) dwelling units shall not be subject to the provisions of this Rule 3 of this regulation.

(50.2) Rule 4 — Regulation of the Importation, Sales, Transportation, Use or Consumption of Certain Fuels

Rule 4.1. It shall be unlawful for any person to import, sell, offer for sale, expose for sale, exchange, deliver or transport for use and consumption in the county, or to use or consume in the County, any fuel containing in excess of 2% sulfur content by weight for fuel burning equipment regulated under Rule 8 and Figure 1. Fuels with sulfur contents greater than allowed in this rule may be burned, used, and consumed, and may be delivered by any person to any user, provided said user utilizes methods or processes or a combination of methods or processes approved in writing by the Director which will limit the emission of sulfur dioxide from the source to a quantity or rate not greater than that which would result from the use of a low sulfur fuel as specified in the first part of this rule. Any person who desires to sell, offer for sale, expose for sale, exchange, deliver, or transport for use and comsumption any fuel with sulfur content greater than allowed as hereinabove set forth upon the basis that the user utilizes methods or processes approved in writing by the Director as hereinabove set forth must have in his possession at the time of sale, offer for sale, exposure for sale, exchange, delivery or transport an exact reproduced copy of the approval by the Director as hereinabove provided for, which approval must at that time be valid, effective and unrevoked. Sale, offer for sale, exposure for sale, exchange, delivery or transport for use and consumption in the absence of such copy of such valid, effective and unrevoked written approval shall be prima facie a violation of this rule and the burden shall be upon the person charged to establish that written and effective approval had been extended by the Director as hereinabove provided.

Rule 4.2. To determine compliance with Rule 4.1 above, the Board is authorized under this regulation to make, or obtain, tests of fuel it deems necessary to determine compliance.

a. An adequate supply of the fuel, ready for use, must be made available to the Director to conduct whatever tests in accordance with A.S.M.E., P.T.C. 3.2—1954 he deems necessary.

b. Any person whose fuel is submitted to such tests must pay all expenses necessary to conduct the tests found to be in violation

c. Tests certified by a competent person approved by the Director may be accepted by the Director as the tests required by this Rule.

Rule 4.3. The provisions of Rule 4 of this regulation shall become effective on and after the 14th day of October, 1970.

Rule 4.4. The Director or his representative may examine the weigh bills for all fuels delivered to and by all fossil fuel dealers by any means of transportation.

(51.21) Rule 5 — Prohibition of Hand-Fired Fuel Burning Equipment

Rule 5.1. All hand-firing with solid fuels will be prohibited on and after the 14th day of October, 1972.

Rule 5.2. Rule 5.1 shall not apply to fuel burning equipment used exclusively for heating a dwelling designed for occupancy of less than three families.

Rule 5.3. Where it is shown by a person to be unduly costly to comply with Rule 5.1 for a specific installation without a commensurate benefit to the public, the Board may, upon written request by such person, grant an extension of time for compliance with Rule 5.1. Such extensions shall expire in not more than one (1) year but may, in the discretion of the Board, be further extended upon a new showing of the necessity for such extension, by such a person.

(51.13) Rule 6 — Prohibition of Open Burning

Rule 6.1. No person shall cause, suffer, allow or permit open burning except as provided in Section 6.3. No person shall fail or refuse to take all reasonable and necessary steps and precautions to prevent open burning upon any premises owned, occupied or under the control of such person. No person shall fail or refuse to take all reasonable and necessary steps and precautions to extinguish or otherwise terminate and abate any premises owner, occupied or under the control of such person or upon premises upon which such person is carrying out any operation or activity.

Rule 6.2. No person shall conduct a salvage operation by open burning.

Rule 6.3. Open burning of vegetation and wood materials may be permitted by the Director provided the following conditions are met:

a. A signed application shall be submitted to the Director giving the reasons why no other method of disposal can be employed, amount of material to be burned and location of material to be burned.

b. No burning shall occur until such inspection of the material as may required by the Bureau is conducted.

c. Burning shall be conducted only on days of low pollution potential, as determined by the Bureau, and only between the hours of 9:00 A.M. and 4:00 P.M. on such days.

d. Only clean fuel not containing garbage, rubber, plastics or other refuse shall be allowed for the start-up of fires.

e. Written approval is received from the Director.

Rule 6.4. Controlled burning of vegetation and wood materials may be permitted by the Director provided the following conditions are met:

a. A signed application shall be submitted to the Director including the following:

   1. Complete plans and details of the method and equipment to be used for the control of such burning.

   2. Name of the person in charge of the equipment and how he may be contacted.

b. An annual fee of $100.00 shall be included with the application, which fee shall be collected by the Bureau and remitted to the Fiscal Agent of the Board. Controlled burning permits are renewable annually. Application for renewal of a controlled burning permit shall be made in writing not less than sixty (60) days prior to the expiration of the permit for which renewal is sought.

c. Written approval is received from the Director.

Rule 6.5. Open burning shall be allowed without compliance with Rule 6.3 only in the following specifically listed instances:

a. Fires used for cooking of food or for ceremonial or recreational purposes, including barbecues and outdoor fireplaces, but only if such fires are fuelled for that particular purpose.

b. Fires set by or at the direction of responsible fire control agencies for the prevention, elimination or reduction of the spread of existing fires.

c. Safety flares and smokeless flares, except those for the combustion of waste gases. Flares for the combustion of waste gases shall comply with applicable provisions of Section 10 of this regulation.

Rule 6.6. Open burning may be permitted in the following instances, provided a written statement, such as is required in Rule 6.3.a. is filed with the Director and written approval is given by the Director:

a. Fires set for the training and instruction of public or private fire fighting personnel, including those in civil defense.

b. Other open burning where there is no other practical, safe and lawful method of disposal.

(51.9) Rule 7 — Incinerator Regulation

Rule 7.1. All existing installations from which any air contaminant is emitted or escapes into open air as a result of the operation of any incinerator shall comply with the provisions of Rule 7.3 and 7.4 on and after the 14th day of October, 1972. Provided, however, that on or before the 14th day of October, 1971, the person in responsible charge of such installation shall file with the Director plans and a compliance schedule.

Rule 7.2. Rules 7.3 and 7.4 shall apply to all new incinerator installations.

Rule 7.3. No person shall cause, suffer, allow or permit emission form any incinerator in being before the 1st day of January, 1973, in excess of 0.4 pounds per 100 pounds charge. No person shall cause, suffer, allow or permit emission from any incinerator built or installed on and after the 1st day of January, 1973, in excess of 0.1 pounds per 100 pounds charge. Provided, however, that on and after the 1st day of July, 1975, no person shall cause, suffer, allow or permit emission from any incinerator in excess of 0.1 pounds per 100 pounds charge.

Rule 7.4. All incinerators constructed after the 14th day of October, 1969, shall be of the multiple chamber design consisting of three or more refractory lined combustion furnaces connected in series and with provisions to (1) create a preignition temperature of 800^{o} F. in the primary furnace and (2) maintain a temperature of 1500^{o} F. in the secondary furnace.

Designs other than those outlined above shall be considered on an individual basis and will be exempt from these provisions, if said design results in performance which meets the standards set forth in Rule 7.3 above.

Rule 7.5. All incinerators must be supplied with an effective spark arrester and a barometric damper.

Rule 7.6. A pathological waste incinerator is one which has a solid hearth and which otherwise complies with the provisions of Rule 7.4. Any non-pathological waste incinerator in which pathological wastes are to be burned must have a solid hearth of sufficient size to accomodate such waste, which hearth must be located in such position that the waste can be placed oppsite the flame port in the hottest part of the primary chamber. Unless the incinerator is specifically designed for the burning of pathological waste, no more than ten (10) percent of a charge shall consist of pathological waste.

Rule 7.7. On and after the 1st day of March, 1973, the person in responsible charge of the operation of an incinerator must be licensed by the Bureau. Such license shall be issued only after a passing score is received on a standardized test to be devised and administered by the Bureau. The Bureau shall test persons on their knowledge of the principles of incineration, including but not necessarily limited to the subjects of preignition, firing and cleaning. The Bureau shall have the power to collect a onetime fee of $5.00 pursuant to the issuance of such license. Said fee shall be remitted to the Fiscal Agent of the Board. The Director shall have authority to suspend or revoke such license if the person holding such license willfully or by reason of incompetence violates any provision of this regulation. No license issued in accordance with the provisions of this Rule shall be assignable or transferrable. The failure to issue a license, or suspension or revocation of such license shall be an order or determination of the Director within the meaning of Section 7-E of this regulation.

(51.5) Rule 8 — Fuel Burning Equipment Regulations

Rule 8.1. All existing installations from which any air contaminant is emitted or escapes into open air as a result of the combustion of fuel shall comply with Schedule 1 of Table 1 and with the provisions of Rule 8.3. on and after the 14th day of October, 1972. Schedule 1 of Table 1 and the provisions of Rule 8.3. shall apply to all new fuel burning installations. Provided, however, that on and after the 1st day of July, 1974, the emission limits of Schedule 1 of Table 1 shall no longer be applicable and no person shall cause, suffer, allow or permit the emission of air contaminants from fuel burning equipment in being before the 1st day of January, 1973, in excess of that provided in Schedule 2 of Table 1.

Rule 8.2. No person shall cause, suffer, allow or permit the emission of air contaminants from fuel burning equipment build or installed on and after the 1st day of Jaunary, 1973, in excess of that provided in Schedule 3 of Table 1.

Rule 8.3. The emission or escape into the open air of fly ash, particulate matter or other air contaminants, resulting from the combustion of fuel, from any fuel burning equipment or from any stack connected thereto, in quantities exceeding the limits specified in Table 1 for the size of equipment involved is prohibited. The limitations, subject to linear interpolation, are to be conformed to when the fuel burning equipment is operating at the maximum design heat input rating. The heat input rating of any unit discharging to a single stack shall be the maximum design input rating, including both heat available from burning of fuel and any sensible heat from materials introduced into the combustion zone at temperatures above the ambient air temperature. When two or more fuel burning units are connected to a single stack, the combined fuel burning capacity of all units connected to the stack denotes the size of equipment in terms of BTU input for establishing the maximum allowable emission. When one fuel burning unit is connected to two or more stacks, the heat input of the equipment shall be the criterion for the maximum allowable total emission from all stacks combined.

Tests to determine compliance with this rule shall be conducted as provided in Sections 10 and 14 of this regulation.

Rule 8.4. Fuel burning equipment located in dwellings designed for not more than two families are exempt from the operation of Rule 8.

TABLE 1

Emission Standards For Fuel Burning Equipment

Equipment Rating (10^6 BTU/Hr)	Allowable Particulate Emission (Lbs/10^6 BTU/Hr) Schedule 1	Schedule 2	Schedule 3
0-10.0	.60	.60	.60
50.0	.46	.40	.25
100.0	.40	.33	.17
250.0	.36	.26	.10
500.0	.30	.22	.10
1,000.0	.27	.18	.10
2,000.0	.245	.15	.10
5,000.0	.210	.12	.10
7,500.0	.200	.11	.10
10,000.0	.185	.10	,10

Determine intermediate values by linear interpolation.

(12.0) (50.1.2) Rule 9 — Regulation of Visible Emissions from Internal Combustion Engines

Rule 9.1. No person shall cause, suffer, allow or permit the emission of visible air contaminants from any spark ignition engine of ten (10) horsepower or more

a. For a period of time exceeding ten (10) seconds, or

b. After the vehicle has moved 100 yards or more from its initial starting point.

Rule 9.2. No person shall cause, suffer, allow or permit the visible emission of air contaminants from a diesel type engine for a period of more than sixty (60) consecutive seconds in excess of number one (1) of the Ringelmann Chart, or in excess of an opacity of twenty (20) percent.

Rule 9.3. Responsibility for compliance with Rules 9.1 and 9.2. applies to the owner, the registered owner, the lessee and the operator, individually, and each shall be jointly or severally liable for violation of these Rules and subject to the fines and penalties of this regulation.

Rule 9.4. Testing of vehicles to determine compliance with Rules 9.1 and 9.2, shall become a part of and be included in the semi-annual safety lane inspection required by Section 24.317 of the Chattagoona City Code (Code 1968).

Rule 9.5. Testing in the outdoor atmosphere of internal combustion engines which have been or are to be repaired will be allowed if such tests are performed on the premises of the repairing facility.

Rule 9.6. No motor vehicle which is equipped with a pollution control device shall be modified or altered in any manner which will decrease its efficiency or effectiveness in the control of air pollution.

Rule 9.7. No diesel engine which supplies motive power to a vehicle shall be allowed to idle more than five (5) consecutive minutes when the vehicle is not in motion, except when the vehicle is forced to remain motionless because of traffic conditions over which the operator has no control; provided, however, that any diesel engine which supplies motive power to a truck or locomotive shall be allowed to idle for more than five (5) consecutive minutes when it is at a distance in excess of five hundred (500) feet from the nearest residential, recreational, institutional, retail sales, hotel or educational premises.

(50.1.1) Rule 10 — Process Emission Regulations

Except as provided by, and to the extent permitted under Rule 5 and Rule 7 of Section 9 of this regulation, all installations or operations from which any air contaminant is, or may be, emitted or permitted to escape into the open air shall comply with the provisions of this rule.

Rule 10.1. On or before the 1st day of January, 1971, the owner, operator of, or other person responsible for an existing installation or operation shall file with the Director, for each source of emission, complete plans and schedule for compliance with the provisions of this regulation.

Rule 10.2. No person shall cause, suffer, allow or permit emission from any new air contaminant source in excess of that provided in Schedule 1 of Table 2 of Rule 10.

Rule 10.3. No person shall cause, suffer, allow or permit emission from any existing air contaminant source in excess of that provided in Schedule 2 of Table 2 of Rule 10 on or after the 14th day of October, 1972.

Rule 10.4. On and after the 1st day of July, 1974, the provisions of Rule 10.3 shall no longer be applicable and all air contaminant sources shall be construed as new sources for the purpose of Rule 10 of this regulation and shall be required to meet those standards set forth in Rule 10.2 stated above.

Rule 10.5. Notwithstanding the provisions of Rule 10.2. and Rule 10.4., no person shall cause, suffer, allow or permit emission from any air contaminant source built or installed on and after the 1st day of January, 1973, in excess of that provided in Schedule 3 of Table 2 of Rule 10.

Rule 10.6. Tests to determine compliance with this Rule 10 shall be conducted as provided in Sections 10 and 14 of this regulation; provided, however, that compliance with this Rule 10 does not exempt such persons from the compliance with any other rule or section of this regulation applicable to emissions.

TABLE 2

Particulate Emission Standards For Process Equipment

Input Process Weight (Lb/Hr)	Output Emission Installation Type (Lb/Hr)		
	Schedule 1	Schedule 2	Schedule 3
100	0.551	0.551	0.55
200	0.887	0.887	0.86
400	1.40	1.40	1.32
600	1.83	1.83	1.70
800	2.22	2.48	2.03
1,000	2.58	2.91	2.34
1,500	3.38	3.98	3.00
2,000	4.10	5.00	3.59
2,500	4.76	6.00	4.12
3,000	5.38	6.92	4.62
3,500	5.96	7.85	5.08
4,000	6.52	8.80	5.52
5,000	7.58	10.2	6.34
6,000	8.56	12.0	7.09
7,000	9.49	13.4	7.81
8,000	10.4	14.8	8.50
9,000	11.2	16.1	9.10
10,000	12.0	17.9	9.70
12,000	13.6	20.3	10.90
16,000	16.5	25.7	13.0
18,000	17.9	28.0	14.0
20,000	19.2	30.6	15.0
30,000	25.2	42.0	19.2
40,000	30.5	47.0	23.0
50,000	35.4	48.0	26.4
60,000	40.0	49.0	29.6
70,000	41.3	49.6	30.6
80,000	42.5	50.0	31.2
90,000	43.6	50.3	31.8
100,000	44.6	51.0	32.4
120,000	46.3	52.0	33.3
140,000	47.8	53.0	34.2
160,000	49.0	54.6	34.9
200,000	51.2	55.5	36.1
1,000,000	69.0	69.0	46.7

Determine intermediate values by linear interpolation.

(51.21) Rule 11 — Regulation of Transporting and Material Handling in Open Air

Rule 11.1. No person shall cause or permit the handling, processing, transporting or storage of any material in the open air in a manner which allows or may allow particulate matter to become airborne which exceeds Ringelmann 1 or its equivalent opacity.

Rule 11.2. No person shall cause or permit a buidling or its appurtenances, a road, a driveway, a parking area, or an open area to be constructed, used, repaired or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne. The Director may require such reasonable measures as may be necessary to prevent particulate matter from becoming airborne including but not limited to paving or cleaning of roads, driveways, and parking areas; by the application of dust-free surfaces; by the application of water; and by the planting and maintenance of vegetative ground cover.

(50.6) Rule 12 — Regulation of Odors in the Ambient Air

Rule 12.1. An odor will be deemed "objectionable" when 15 percent or more of the people exposed to it believe it to be objectionable in usual places of occupancy based on a sample size of at least 20 people or if fewer than 20 people are exposed, when a minimum of three people exposed to it believe it to be objectionable.

Rule 12.2. No person shall cause, suffer, allow or permit emission such as to cause an "objectionable" odor on or adjacent to residential, recreational, institutional, retail sales, hotel or educational premises.

Rule 12.3. No person shall cause, suffer, allow or permit the emission as to cause an "objectionable" odor on or adjacent to premises other than those listed in Rule 12.2 unless air containing such odorous matter is diluted with four or more volumes of odor-free air.

(50.2) Rule 13 — Regulation of Sulfur Oxides

Rule 13.1. No person shall cause, suffer, allow or permit the emission of gas containing sulfur dioxide from any new source in excess of 500 ppm (volume).

Rule 13.2. No person shall cause, suffer, allow or permit the emission of gas containing sulfur dioxide from any existing source in excess of 2,000 ppm (volume).

Rule 13.3. On and after the 1st day of July, 1974, the provisions of Rule 13.2 above shall no longer be applicable and all air contaminant sources shall be construed as new sources for the purpose of Rule 13 of this regulation and shall be required to meet those standards set forth in Rule 13.1 above stated.

Rule 13.4. Fuel burning equipment exhaust gas volume is to be corrected to thirty (30) percent excess air for purposes of determining sulfur dioxide concentrations.

Rule 13.5. All sampling of exhaust gases from any source of sulfur dioxide and all analyses of samples to determine the amount of sulfur dioxide in exhaust gases shall be conducted as specified by techniques promulgated by the Board.

Rule 13.6. For the purposes of this Rule 13, all sulfur present in gaseous compounds and containing oxygen shall be deemed to be present as sulfur dioxide.

Rule 13.7. Compliance with this Rule 13 shall not relieve a person from requirements of Rule 12 or from the requirements of any other rules or provisions of this regulation.

(50.7) Rule 14 — Nuisances

Rule 14.1. No person shall cause, suffer, allow or permit or fail to take reasonable steps to abate or terminate the discharge from any source whatsoever, of air contaminants or other material which shall cause injury, detriment, nuisance, or annoyance of the public or which endanger the comfort, repose, health or safety of the public or which cause or have a tendency to cause injury or damage to business or property.

Rule 14.2. No person shall cause, suffer, allow or permit or fail to take reasonable steps to abate or terminate the discharge from any source whatsoever air contaminants or water or steam or a combination of such which cause, or combine with natural elements to cause, the reduction of visibility across any road or thoroughfare to such an extend as to cause a hazard.

Rule 14.3. Nothing in any other section of this regulation relating to regulation of emission or pollutants shall in any manner be construed as authorizing or legalizing the creation or maintenance of a nuisance as described in this Rule 14 of this regulation or as may otherwise be deemed by law to be a nuisance.

SECTION 10

(3.0)

Installation Permit, Temporary Operating Permit, and Certificate of Operation

Section 10-A. Installation Permit

1. No person shall construct, install, reconstruct or alter any fuel burning, refuse burning, process or control equipment until an application, together with plans and specifications applicable to the work on the equip-

ment and structures or buildings used in connection therewith, has been filed by the person or his agent in the office of, and has been approved by, the Director and an Installation Permit issued by him for such construction, installation or alteration.

2. The plans and specifications, submitted pursuant to Paragraph A-1 of this section; shall show the form and dimensions of the process, fuel burning, refuse burning, or control equipment, together with the description and dimensions of the building or part thereof in which such process, fuel burning, refuse burning, or control equipment is to be located; the character of the fuel to be used; the maximum quantity of such fuel to be burned per hour; the kind and amount of basic materials process; the expected air contaminant emission rate; the operating requirements; contaminant concentration; gas volume, and gas temperature at the emission point; the location and elevation of the emission point relative to nearby structures, window openings, etc.; a flow diagram showing the equipment under consideration and its relationship to other processes, if any, and a general description of these processes; any other reasonable and pertinent information that may be required by the Director. The plans and specifications shall show that the room or premises in which fuel, refuse burning or process equipment is to be located is provided with adequate ventilation to provide sufficient air for the process and for the safety of people.

3. Maintenance or repair or physical transfer of any installed equipment within the premises of original installation which does not change the capacity of such process or control equipment, and which does not involve any change in the method of processing or increase the amount or alter the characteristics of the emission of air pollutant therefrom may be made without an Installation Permit. The physical transfer of any installed equipment to a location other than within the premises of original installation shall cause said equipment to be reclassified as "new equipment."

4. The requirement for filing plans and specifications involving the installation, erection, construction, reconstruction, alteration, or repair of, or addition to, any fuel or refuse burning equipment or process equip- or the building of pilot plants or process, to be used or to become part of a secret process is hereby suspended upon the filing with the Bureau, in lieu of the filing of plans and specifications, of an affidavit of a responsible person to the effect that such equipment or process is to be so used. Such person shall be required to furnish bond in favor of the County and in an amount to be set by the Board. Said bond to be conditioned upon compliance with this regulation and to provide for forfeiture upon proof of a violation of any provision of this regulation by the subject secret process; provided that proof of a violation of any provision of this regulation shall prima facie create a presumption of fact that said violation was a violation by the subject secret process. Provided, however, the type and emission rate of each contaminant shall in no event be deemed to be secret information subject to the protection of the provisions of

this paragraph; and provided further that the person claiming the protection of this paragraph shall institute and conduct a self-monitoring system and shall report the results thereof when and as required by the Director. The suspension of the filing of such plans for the secret process from complying with all other provisions of this regulation.

5. No construction, installation, reconstruction, or alteration shall be made which is not in accordance with the plans, specifications, and other pertinent information upon which the Installation Permit was issued without the written approval of the Director.

6. Violation of the Installation Permit shall be sufficient for the Director to stop all work, and he is hereby authorized to seal the installation. No further work shall be done until the Director is assured that the condition in question will be corrected and that the work will proceed in accordance with the Installation Permit.

7. If work is begun in violation of Installation Permit requirements, the Director may grant such permit, conditional upon removal of all faulty work. The Installation Permit fee shall be doubled in such cases. Provided, however, that this provisions shall not be construed as authorizing such violation.

8. If the work authorized under the Installation Permit is not started within one year of the date of the Installation Permit, the permit shall become void and all fees shall be forfeited, unless an extension of time is warranted and granted by the Director.

9. An emergency repair other than as specified in sub-section A-3 of this Section may be made prior to the application of an Installation Permit if serious consequences may result if the repair were deferred. When such repair is made, the person concerned shall notify the Director on the first business day after the emergency occurred and file an application for an Installation Permit if directed to do so by the Director.

10. Upon review of the required plans and specifications, an application shall be approved or rejected within a reasonable time after it is filed in the office of the Director. Upon the approval of the application and upon the payment of the prescribed fees, the Director shall issue an Installation Permit. Issuance of an Installation Permit will not be construed to indicate compliance with the requirements of the Building Code of Hamilton County or any other regulations of Hamilton County.

10(a). The permits contemplated by this Section 10 shall be for the control of pollution. This Section 10 shall apply to fuel burning equipment, refuse burning equipment, process equipment which causes emission, or any other equipment that tends to pollute the air, and the pollution control equipment, but nothing contained herein shall require application for, or issuance of, a permit for any overall manufacturing process provided permits are applied for, and obtained, for the foregoing items of equipment in the overall process.

11. Any person, upon receiving a rejection of an application for an Installation Permit, may modify his plans and specifications to meet the requirements of this regulation and resubmit them to the Bureau. This procedure must be followed until approval of the application is granted.

12. The Director may reject any application for an Installation Permit and require further tests or information if:

a. In his opinion, the proposed construction, installation or alteration or the anticipated emission of air contaminants does not meet the provisions of this regulation.

b. The proposed emission control equipment is of a type reasonably anticipated by the Director, not to be adequate for its intended usage.

13. No building permit shall be issued to any person by the Building Inspector for the erection, construction, reconstruction, alteration, addition or major repair of any structure when the plans or specifications for such structure include any fuel or refuse burning equipment or process equipment until such plans and specifications have been submitted to the Director and an Installation Permit issued.

14. The Bureau shall have the right to enter the premises and inspect the installation in progress at any reasonable time.

15. Fees (Installation Permit)

The following fee schedule shall apply to the issuance of all Installation Permits with the exception of those solely for control equipment, for which no fee is required. Said fees shall be collected by the Bureau and remitted to the Fiscal Agent of the Board

SCHEDULE 10-A—I. FUEL BURNING EQUIPMENT

Fees shall be assessed based upon the design fuel consumption per unit as expressed in thousands of British Thermal Units (BTU) per hour, using gross heating values of the fuel.

1000 BTU Per Hour	Fee
Up to 150	$10.00
150 to 399	15.00
400 to 649	25.00
650 to 1499	35.00
1500 to 2499	45.00
2500 to 4999	55.00
5000 to 14999	65.00
15000 or greater	75.00 + $10.00 for each additional 1000

(NOTE: One boiler horsepower is equivalent to 33,472 BTU per hour)

SCHEDULE 10-A—II. INCINERATORS

Fees shall be assessed based upon the manufacturer's rated input as expressed in pounds per hour.

INPUT—Pounds Per Hour	Fee
Up to 200	$10.00
200 to 599	20.00
600 to 999	30.00
1000 to 1999	40.00
2000 to 4999	50.00
5000 to 9999	60.00
10000 and greater	70.00 + $10.00 for each additional 50 T/24 Hr.

SCHEDULE 10-A—III. PROCESS EQUIPEMENT

Fees shall be assessed based upon the process weight per hour as expressed in pounds per hour.

Input Process Weight-Pounds Per Hour	Fee
Up to 999	$ 20.00
1000 to 9,999	35.00
10,000 to 49,999	50.00
50,000 to 149,999	65.00
150,000 to 499,999	80.00
500,000 to 999,999	95.00
1,000,000 or greater	100.00

(NOTE: Examples of this type of equipment include: chemical, processing equipment, crushing, grinding or milling equipment, metal forming equipment.)

SCHEDULE 10-A—IV. ODOR PRODUCING EQUIPMENT

A fee of $15.00 per unit shall be assessed.

(NOTE: Examples of this type include: tar and asphalt kettles; road material treating plans, varnish and paint heating kettles, rendering kettles).

SCHEDULE 10-A—V. MISCELLANEOUS

Any article, machine, equipment or other contrivance which is not included in the preceding schedules shall be assessed a fee of $15.00 per unit.

Section 10-B. Temporary Operating Permit

1. No person shall operate or cause to be operated any new or altered fuel burning, refuse burning or process or control equipment or any equipment pertaining thereto for which an Installation Permit was required or was issued until a Temporary Operating Permit is issued by the Director. The person responsible for the installation, construction or alteration of any fuel-burning, refuse-burning or process or control equipment for which Installation Permit is required, shall give notification to the Director when the work is completed and ready for final inspection. The Director is hereby authorized to seal the equipment in operation for which Temporary Operating Permit was not obtained as required in this regulation.

This notification to the Director shall include:

a. The equipment or control apparatus in consideration.

b. Any control equipment connected or attached to, or serving, or served by the unit unless up to date information is on file with the Bureau.

c. Any reasonable additional information, evidence or documentation to show that the completed work is in accord with the original plans as stipulated in Section 10-A.

2. Failure to operate successfully under test within the limitations and requirements of the regulation under a Temporary Operating Permit shall constitute sufficient grounds for ordering changes in the installation before a Certificate of Operation can be granted. Responsibility for proof, and all expenses incurred in running the tests under the Temporary Operating Permit shall be borne by the person owning, operating or in charge of control of such equipment, or their agents. The Director may, if in his opinion the nature of the installation in consideration of the use to which it is to be put so justified, waive the demonstration or test operation under the Temporary Operating Permit, but such waiver shall in no manner provide immunity from prosecution for violations of the requirements of the regulation.

3. The Bureau shall have the right to enter the owner's premises to inspect the installation and observe any test or operation of the equipment for which a Temporary Operating Permit was issued.

4. A Temporary Operating Permit shall be valid for not in excess of six (6) months after the date of issue. Extensions of time not in excess of three (3) months may be granted by the Director. Upon the expiration of such Permit or of such extensions as may be granted, application for a Certificate of Operation must be made as a hereinafter provided.

5. A fee of $15.00 will be assessed for the issuance of each Temporary Operating Permit, and for each extension thereof should an extension be

granted, which fee shall be collected by the Bureau and remitted to the Fiscal Agent of the Board. No fee shall be required for permits upon control equipment.

Section 10-C. Certificate of Operation

1. After the Temporary Operating Permit has been issued and it is demonstrated to the satisfaction of the Director that the fuel-burning, refuse-burning or process or control equipment can be operated in compliance with this regulation, a Certificate of Operation shall be issued by the Director. Said Certificate of Operation shall be kept on file and made available to Bureau representatives upon request. The Certificate of Operation shall properly identify the equipment to which it pertains and shall specify the class of fuel, type of raw material used, if any, for which the equipment and appurtenances have been designed or which has been successfully used in the operating test. The owner or his agent shall be responsible for notifying the Director that equipment for which a Temporary Operating Permit has been issued has been tested and is ready for permanent operation. With such notification the owner shall submit to the Director test and operation data as required by the Director obtained during the temporary operating period for use ad evidence that the equipment will operate in compliance with all provisions of the regulation.

The Certificate of Operation shall be issued for a one (1) year period and shall be renewable annually. Application for renewal of the Certificate of Operation shall be made in writing upon forms furnished by the Bureau and shall be made not less than sixty (60) days prior to expiration of the Certificate for which renewal is sought. Disclosures of information, tests and other prerequistes to the issue of an Installation Permit, Temporary Operating Permit or Original Certificate of Operation may be required by the Director prior to issue of a renewal Certificate of Operation.

2. Sampling and Testing

a. Authorization. The Director is authorized to conduct or cause to be conducted by the owner any test or tests of any new or installed equipment, the operation of which, in his opinion, can be expected to result in emissions in excess of the limitations in this regulation, or when, in his judgement, there is evidence that any such equipment is exceeding any emission limitation prescribed in said regulation.

The Director may, at his discretion, accept certification tests submitted by the owner if, in his judgement, these tests are sufficient to determine that the limitations of this regulation will not be exceeded.

The Director and/or a representative of the Director shall be permitted to witness any testing.

b. Test Openings, Scaffolding and Facilities. When test(s) of existing equipment are deemed necessary by the Director and the Director elects to conduct such test himself or have his representative conduct such test, the owner shall, at his expense, provide test openings, access scaffolding and other pertinent facilities as requested by the Director. Such facilities may be either permanent or temporary, at the discretion of the owner for their provisions; and shall be suitable for determination consistent with the emission limits established in this regulation; and shall comply with all laws and regulations concerning safe construction of, and safe practice in connection with such facilities; provided, however, that if the owner elects to provide temporary facilities then in the event future tests are desired by the Director the owner shall at his expense provide further facilities when requested by the Director.

c. Departmental Test. Nothing in these rules and regulations concerning tests conducted by and paid for by any person or his authorized agent shall be deemed to abridge the rights of the Director or his representative to conduct separate or additional tests if he so desires on behalf of the Bureau of Air Pollution Control and at the department's expense, except as in the section of this regulation covering test openings scaffolding and facilities.

d. Cost of Test. The owner is liable for the cost of initial tests of any equipment and/or tests resulting from any change in equipment, methods or conditions or operation. Initial tests will include all testing performed for the purpose of demonstrating compliance with the regulation for permit to install and/or operate. If the results of further tests performed by the Bureau show the owner to be a violator, the owner is responsible for paying all attendant cost for conducting such test. If said test(s) does not substantiate a violation of this regulation, then the Bureau shall be responsible for paying all attendant costs for conducting said test(s) except those costs occurring for test openings, scaffolding and facilities. If the owner so elects to conduct his own test after any change in equipment, method or condition of operation, the owner, so electing shall pay for the test(s) irrespective of their outcome. The data obtained during any such testing shall be made available to the Director and the owner.

e. Methods and Procedures. Sampling and analytical determinations to ascertain compliance with these rules shall be made in accordance with methods and procedures acceptable to the Director of the Air Pollution Control Bureau.

3. When a Certificate of Operation is refused, suspended or revoked, the Director is authorized to seal the process or control equipment until the owner shall have complied with the provisions of this regulation, and no person shall operate any equipment which requires a Certificate of Operation until such Certificate shall have been obtained. No person shall cause, suffer, allow or permit the operation of any equipment which requires a Certificate of Operation until such Certificate shall have been obtained. No person shall cause, suffer, allow or permit the operation

of any equipment which requires a Certificate of Operation if a previously issued Certificate of Operation has been suspended or revoked.

4. The Director shall have authority to require owners, operators or persons in responible charge of stationary sources to install, maintain and use emission monitoring devices and to make periodic reports to the Director on the nature and amounts of emissions from such stationary sources. The Director shall have authority to make such data available to the public as reported and as correlated with any applicable emission standards or limitations.

5. Fees.

The following fee schedule shall apply to the issuance of Certificates of Operation. Said fees shall be collected by the Bureau and remitted to the Fiscal Agent of the Board. Fees shall be assessed on categories identical to those in the Installation Permit Section of this regulation.

SCHEDULE 10-C-I. FUEL BURNING EQUIPMENT

1000 BTU Per Hour	Fee
Up to 150	$25.00
150 to 399	35.00
400 to 649	45.00
650 to 1499	55.00
1500 to 2499	65.00
2500 to 4999	75.00
5000 to 14,999	85.00
15,000 and greater	100.00

SCHEDULE 10-C-II. INCINERATORS

Input Pounds Per Hour	Fee
Up to 200	$35.00
200 to 599	40.00
600 to 999	45.00
1,000 to 1,999	50.00
2,000 to 4,999	55.00
5,000 to 9,999	60.00
10,000 and greater	65.00 + $5.00 For each additional 100

SCHEDULE 10-C-III. PROCESS EQUIPMENT

Input Process Weight- Pounds Per Hour	Fee
Up to 999	$45.00
1,000 to 9,999	60.00
10,000 to 49,999	75.00
50,000 to 149,999	90.00
150,000 and greater	100.00

SCHEDULE 10-C-IV. ODOR PRODUCING EQUIPMENT

Each unit shall be assessed a fee of $65.00.

SCHEDULE 10-C-V. MISCELLANEOUS

Each unit shall be assessed a fee of $65.00.

FEES FOR RENEWAL OF OPERATING CERTIFICATE

SCHEDULE 10-C-VI. FUEL BURNING EQUIPMENT

1000 BTU Per Hour	Fee
Up to 150	$10.00
150 to 399	15.00
400 to 649	20.00
650 to 1,499	25.00
1,500 to 2,499	30.00
2,500 to 4,999	35.00
5,000 to 14,999	40.00
15,000 and greater	45.00

SCHEDULE 10-C-VII. INCINERATORS

Input—Pounds Per Hour	Fee
Up to 200	$ 5.00
200 to 599	10.00
600 to 999	15.00
1,000 to 1,999	20.00
2,000 to 4,999	25.00
5,000 to 9,999	30.00
10,000 and greater	35.00

SCHEDULE 10-C-VIII. PROCESS EQUIPMENT

Input Process Weight-Pounds Per Hour	Fee
Up to 999	$25.00
1,000 to 9,999	35.00
10,000 to 49,999	45.00
50,000 to 149,999	55.00
150,000 to 499,999	65.00
500,000 to 999,999	75.00
1,000,000 and greater	85.00

SCHEDULE 10-C-IX. ODOR PRODUCING EQUIPMENT

Each unit shall be assessed a fee of $15.00.

SCHEDULE 10-C-X. MISCELLANEOUS

Each unit shall be assessed a fee of $15.00.

Section 10-D. (Reserved).

Section 10-E. General Requirements

1. On and after the 14th day of October, 1972, no person shall operate or cause to be operated any existing fuel-burning, refuse-burning, or process or control equipment or any equipment pertaining thereto which is subject to the provisions of this regulation unless and until a Certificate of Operation or an annual renewal thereof is issued to and validly outstanding for said equipment. Said Certificate of Operation shall be kept posted at or near the installation for which it was issued. Application for a Certificate of Operation to be issued to existing equipment shall be made not later than the 1st day of July, 1972, and there shall be filed with and in support of said application all documents, information, reports, and records and other prerequisties which are required by this section to be filed with and in support of an application for Installation Permits, Temporary Operating Permits and Certificates of Operation as hereinabove set forth.

2. The issuance by the Director of any Installation Permit, Temporary Operating Permit, Certificate of Operation, or renewal thereof, shall not be held to exempt the person to whom the permit or certificate was issued or the person who is in possession of the same, or any other person subject to this regulation from prosecution for any violation of any provisions of this regulation, or from action under any other provisions of this regulation.

3. No person shall cause, suffer, allow or permit the operation of any equipment or installation subject to the provisions of this regulation in violation of an authorized seal of said equipment or installation.

4. The provisions of this Section 10 shall not apply to fuel burning equipment used exclusively for heating the dwellings of less than three families, nor to equipment for burning gas, or number 1 or number 2 fuel oil, nor to internal combustion engines.

5. Duplicate permits may be issued by the Director if notification is made by the person responsible within ten (10) days after the loss or destruction of the original certificate. A fee of $3.00 shall be charged for issuing a duplicate permit.

6. The schedules of fees for permits for Fuel Burning Equipment, Incinerators and Crematories, and Process Equipment are to be based upon rated design input of said equipment or the maximum operational input, whichever is larger.

7. In no event shall any fee for Installation Permit, Temporary Operating Permit or Certificate of Operation exceed the amount of One Hundred ($100.00) Dollars.

8. Any equipment which can be classified as a minor pollution source shall be exempted from the requirements of Sections 10-A and 10-B, but must have a Certificate of Operation. No person shall operate any such equipment until an application for a Certificate of Operation, together with plans and specifications of the equipment, has been filed by such person and a Certificate of Operation has been issued by the Director. An annual fee of $5.00 shall be assessed for the issuance of a Certificate of Operation upon such equipment.

9. Unless otherwise specified in this regulation all measurements or calculations of stack emission concentrations shall be corrected to the minimum amounts of air and water vapor which are necessary for the process operation. Such measurements or calculations shall be corrected to a standard temperature of seventy (70) degrees Fahrenheit and a standard pressure of seven hundred sixty (760) millimeters of mercury. All water vapor shall be treated as a perfect gas.

SECTION 11

(13.0)

Charges for Technical Reports

Information, circulars, reports of technical work, and other reports prepared by the Air Polltuion Control Bureau when supplied to other governmental agencies or individuals or groups requesting copies of the same may be charged for by the Bureau in a sum not to exceed the costs of preparation and distribution of such documents.

SECTION 12

(13.0)

Records

Section 12-A. The Director shall keep in the office of the Bureau all applications required under the regulation, and a complete record thereof, including a record of all permits and certificates issued. The Director shall keep a record on all official business of the Bureau and complaints and generally of the work done by the Bureau. All such records shall be open for inspection by the public at all reasonable times; provided, however, that such records or other information of a confidential nature voluntarily furnished pursuant to Section 8 shall receive the protection provided by Section 8.

Section 12-B. The Director may at any time require the person responsible for a source of emission subject to the provisions of this regulation to record, maintain and keep records relative to the operation of the source and the emissions from the source, and may further request from such person such information, analyses, or specifications as will disclose the nature, extent, quantity and debris of air contaminants as may be emitted by such source.

SECTION 13

(15.0) Entry and Search Warrants

In the performance of their duties, the Director and other employees of the Bureau are hereby authorized to enter upon and into premises or buildings with permission of the owner or occupant thereof to make inspection of the premises or building, to collect and preserve evidence of all facts of violation of these regulations, or to perform any duty imposed upon them by this regulation.

Alternatively, the Director or other employees of the Bureau or any other law enforcement officer may obtain a search warrant from the State Court of Hamilton County, Tennessee, as other search warrants are issued upon a showing of probable cause to believe that the provisions of this regulation or the rules and regulations thereof have been or are being violated, and may thereafter enter upon or into the premises or buildings and obtain, collect and preserve evidence or perform any duty imposed upon them by this regulation.

SECTION 14

(2.0) General Provisions

Section 14-A. Any owner, operator or other person responsible for any permanently discontinued or dismantled equipment coming under the jurisdication of this regulation shall report to the Bureau within thirty (30) days the permanent discontinuance or dismantlement of such equipment, and to surrender any outstanding permit or the certificate of operation thereon.

Section 14-B. Upset conditions, breakdowns, or scheduled maintenance. Emissions exceeding any of the limits established in this regulation as a direct result of upset conditions in or breakdown or any air pollution control equipment or related operating equipment, as a direct result of the shutdown of such equipment for scheduled maintenance, shall not be deemed to be in violation of the rules establishing such limits, provided all the requirements of this Section 14 are met.

Section 14-C. For scheduled maintenance, a report shall be submitted at least 24 hours prior to shutdown, and for upset conditions or breakdown, a report shall in any case be made to the Bureau not later than the first business day after the occurrance.

Section 14-D. The owner, operator or other person responsible for emission caused by upset conditions or breakdowns shall, with all practicable speed, initiate and complete appropriate reasonable action to correct the conditions causing such emissions to exceed such limits; to reduce the frequency of occurrence of such conditions; to minimize the amount by which said limits are exceeded; and to minimize the length of time for which said limits are exceeded; and shall, upon request of the Director, submit to him a full report of such scheduling and nature of the actions to be taken pursuant to this section.

Section 14-E. Separation of Emissions. If air contaminants from a single source are emitted through two or more emission points, the total emitted quantity of any contaminant, limited in this regulation, cannot exceed the quantity which would be the allowable emission through a single emission point, and the total emitted quantity of any such air contaminant shall be taken as the product of the highest concentration measured in any of the emission points and the exhaust gas volume through all emission points, unless the person responsible for the source proves the correct total emitted quantity to be within the limits established by this regulation.

Section 14-F. Combination of contaminants prior to emission. If air contaminants from two or more sources are combined prior to emission and there are adequate and reliable means reasonably susceptible to confirmation and use by the Director for establishing a separation of the components of the combined emission to indicate the nature, extent, quantity and degree of emission arising from each such source, this regulation shall apply to each source separately.

Section 14-G. Inseparable combination of contaminants prior to emission. If air contaminants from two or more sources are combined prior to emission and combined emissions cannot be separated according to the requirements of Section 14-F, this regulation shall be applied to the combined emission as if it originated in a single source subject to the most stringent limitations and requirements placed by this regulation on any of the sources whose air contaminants are so combined.

SECTION 15

(3.0) ## Registration of Equipment

The owner, operator or user of all existing equipment shall register same with the Director of the Bureau of Air Pollution Control within ninety (90) days after the effective date of this regulation.

SECTION 16

(1.0) ## DEFINITIONS

In the interpretation and enforcement of this regulation, the following definitions shall apply:

1. Air contaminant—Any smoke, soot, fly ash, dust, cinders, dirt, noxious or obnoxious acids, fumes, oxides, gases, vapors, odors, toxic or radioactive substance, waste, particulate, solid, liquid or gaseous matter, or any other materials in the outdoor atmosphere but excluding uncombined water.

2. Air flow permeability—The volumetric rate of air flow in cfm produced by a pressure decrease of 0.5 in. w.g. across a new clean filtering fabric, divided by the area of the fabric in $ft.^2$. The test air stream is maintained at nominal atmospheric pressure and temperature.

3. Air pollution—The presence in the outdoor atmosphere of one or more air contaminants or combinations thereof in such quantities and of such duration that they are or may tend to be injurious to human, plant, or animal life or that interfere with the comfortable enjoyment of life or property or the conduct of business.

4. Asbestos—Any of six (6) naturally occurring hydrated mineral silicates: Actinolite, amosite, anthophyllite, chrysotile, crocidolite and tremolite.

5. Board—The Chattanooga-Hamilton County Air Pollution Control Board as recognized and/or created by this regulation.

6. Bureau—The Bureau of Air Pollution Control as recognized and/or established by this regulation.

7. Control equipment—Any item of equipment used to eliminate or reduce the emission of an air contaminant.

8. Controlled burning—Open burning conducted in such manner or with the aid of such special equipment that emissions are reduced.

9. Director—The Director of the Bureau.

10. Dry basis—The method of reporting coal analysis with moisture eliminated and remaining constituents recalculated to total 100 percent.

11. Dwelling unit—Any room or group of rooms located within a dwelling and forming a single habitable unit with facilities which are used or intended to be used for living, cooking, sleeping and eating.

12. Emission—A release into the outdoor atmosphere of air contaminants.

13. Emission point—That place where emission occurs.

14. Excess air—Air entering a combustion chamber in excess of the amount theoretically required to complete combustion of materials in the combustion chamber.

15. Existing—Things, such as equipment, machines, devices, articles, contrivances or installations which were in being before the 14th day of October 1969. If any such existing equipment, machine, device, article, contrivance or installation is altered, repaired or rebuilt so that potential air pollutant emission is increased, it shall be reclassified as "new", as defined in this regulation.

16. Fly ash—Particulate matter capable of being gas or air borne, consisting essentially of fused ash and/or burned or unburned materials resulting from combustion of fuel or refuse.

17. Fossil fuel—Coal, coke and liquid petroleum fuels other than gasoline, diesel fuels and kerosene.

18. Fuel burning equipment—Any equipment, device or contrivance used for the burning of any fuel (except refuse) and all appurtenances thereto, including ducts, breechings, fly ash collecting equipment, fuel feeding equipment, ash removal equipment, combustion controls, stacks, chimneys, etc., used for indirect heating in which the material being heated is not contacted by, and adds no substance to, the products of combustion. Such equipment includes, but is not limited to, that used for heating water to boiling; raising steam or superheating steam; heating air as in warm air furnaces; furnishing process heat that is conducted through process vessel walls; and furnishing process heat indirectly through its transfer by fluids.

19. Fugitive dust—Particulate matter emitted from any source other than a flue or stack.

20. Hand fired fuel burning equipment—Fuel burning equipment in which fresh fuel is manually introducted directly into the combustion chamber.

21. Incinerator—Refuse burning equipment as is hereinafter defined.

22. Internal combustion engine—Any engine of 10 horsepower as rated by S.A.E. methods or larger in which the combustion of gaseous, liquid or pulverized solid fuel takes place.

23. Mechanical fuel burning equipment—Fuel burning equipment incorporating means by which fuel is mechanically introduced into the combustion chamber.

24. Minor pollution source—Any fuel burning, refuse burning or process equipment which, without control equipment, would emit less than 1,000 pounds per year and less than ten (10) pounds per day of air contaminants, and which can otherwise be operated in compliance with this regulation; provided that this definition shall not be applicable to sources of asbestos or beryllium emissions.

25. Multiple chamber incinerator—Any article, machine, equipment, contrivance, structure or part of a structure used to dispose of combustible refuse by burning, consisting of three or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned.

26. New—Things, such as equipment, machines, devices, articles, contrivances or installations built or installed on or after the 14th day of October, 1969, and things or installations existing at said stated time which are later altered, repaired or rebuilt so that potential air pollutant emission is increased.

27. Opacity—That property of a substance tending to obscure vision and is measured in terms of per cent obscuration. As used in this regulation, it does not include obscuration of vision due to uncombined water droplets. The percentage opacity of a plume is numerically equal to twenty (20) times the Ringelmann number for a plume of black smoke having equivalent capacity of obscuration.

28. Open burning—Unconfined burning of combustible material where no equipment has been provided and used for control of air.

29. Particulate matter—Material other than uncombined water, which is suspended in air or other gases, in a finely divided form, as a liquid or solid.

30. Pathological waste—All, or parts of, organs, bones, muscles, other tissues and organic wastes of human or animal origin, laboratory cultures, and infective dressings and other similar material.

31. Person—Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine, the singular shall include the plural where indicated by the context.

32. Ppm—Parts per million by volume at a temperature of seventy (70) degrees Fahrenheit and at a pressure of seven hundred sixty (760) millimeters of mercury.

33. Process air—Air used principally as a function of the process.

34. Process emission—Any emission of an air contaminant to the ambient air other than that from fuel burning equipment, incinerator or open burning.

35. Process equipment—Any equipment, device or contrivance for changing any materials whatever or for storage or handling of any materials, the use or existence of which may cause any discharge of air contaminants into the open air but not including that equipment specifically defined as "Fuel Burning Equipment" or "Refuse Burning Equipment," in this regulation.

36. Process weight—The total weight of all materials introduced into any specific process which process may cause any discharge of air contaminant. Solid fuels charged will be considered as part of process weight, but liquid and gaseous fuels and combustion and process air will not. For a cyclical or batch operation, the process weight per hour will be derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle. For a continuous operation, the process weight per hour will be derived by dividing the process weight for a 24-hour period by 24.

37. Refuse burning equipment—Any equipment, device or contrivance used for the destruction of garbage and/or other conbustible wastes by burning, and all appurtenances thereto.

38. Ringelmann Smoke Chart—The Chart published in the U.S. Bureau of Mines Information Circular 7718, for use in measuring the shades, density or opacity of air contaminants arising from stacks and other sources.

39. Salvage operation—Any operation conducted in whole or in part for the salvage or reclaiming of any product or material.

40. Smoke—Small gas or airborne particles resulting from combustion operations and consisting of carbon and ash and other matter and present in sufficient quantity to be observable.

41. Source—Any equipment, process or operation which causes or contributes to cause emission at an emission point or any combination if items of equipment, processes or operations which when combined cause emission at an emission point.

42. Standard conditions—14.7 psia and a temperature of 70° F.

43. Surface-burning type of fuel burning equipment—Fuel burning equipment in which fresh fuel is fired on top of the hot fuel bed.

44. Suspended particulates—Particulate matter which will remain suspended in air for an appreciable period of time.

45. Volatile matter—Those constituents of coal given off as gas or vapor, as determined by methods described by the American Society for Testing Materials. (D271-33).

46. Washing—The process of purifying, cleaning or removing impurities from coal by mechanical processes, regardless of the cleaning medium used.

SECTION 17

(2.0)

Invalidation of Dual Standards

If a Court of competent jurisdiction should ever rule that having two (2) sets of standards for process equipment is invalid, then, in which event, the standards of emissions for new process equipment shall be the standard for all equipment.

SECTION 18

(2.0)

Right to File Abatement Suits

Nothing in this regulation shall be construed to impair the right of the County Council or the County Attorney to file appropriate suits to abate a nuisance involving air pollution or to prosecute anyone for creating a nuisance or allowing a nuisance to continue or permitting a nuisance to exist. The Board, with the approval of the County Attorney, may in the name of the County institute action to abate a nuisance.

SECTION 19

(15.0)

Penalties

a. Any person who violates any provision of this regulation, or any rule in force pursuant thereto, shall be fined as in misdemeanors. Each separate violation shall constitute a separate offense, and upon a continuing violation each hour of violation shall constitute a separate offense.

b. The liabilities which shall be imposed pursuant to any provisions of this regulation upon violation of the provisions of this regulation or any standard, or rule, hereunder, shall not be imposed due to any violation caused by an act of God, war, strike, riot, or other catastrophe.

c. Action pursuant to subsection a or b of this section shall not be a bar to enforcement of this regulation, or rules in force pursuant thereto and orders made pursuant to this regulation, by injunction or other appropriate, remedy, and the Board shall have power to institute and maintain in the name of this County any and all such enforcement proceedings.

SECTION 20

(2.0)

Limitation

This regulation shall not:

a. Abridge, limit, impair, create, enlarge, or otherwise affect substantively or procedurally the right of any person to damages or other relief on account of injury to persons or property and to maintain any action or other appropriate proceeding therefor.

b. Grant to the Board any jurisdiction or authority with respect to air contamination existing solely within commerical and industrial plants, works, or shops.

c. Affect the relations between employers and employees with respect to or arising out of any condition of air contaminantion or air pollution.

d. Supersede or limit the applicability of any law or regulation relating to sanitation, industrial health, or safety.

SECTION 21

(2.0)

Severability

If any section, subsection, sentence, or clause of this regulation should become adjudged invalid, such adjudication shall not affect the validity of the regulations as a whole or of any section, subsection, sentence, or clause hereof not adjudged invalid.

KNOX COUNTY AIR POLLUTION CONTROL REGULATIONS

(2.0) 12.0 Introduction

These regulations are intended to implement provisions of Private Chapter No. 37, which is the Private Act; passed on March 20, 1969, by the Tennessee General Assembly for Knox County, to formulate and enforce air pollution control and to adopt rules and regulations prescribing standards and procedures for carrying out such program and declaring any violation of such rules and regulations to be a misdemeanor.

These regulations are intended to implement provisions of the Air Pollution Control Act, Private Chapter No. 37 and the Tennessee Air Pollution Control Regulations that were adopted by the Tennessee Air Pollution Control Board on January 25, 1972, and became effective on April 3, 1972.

These regulations are based upon the premise that the basic and foremost function of the air is to sustain life and that air in its purest state is best suited for this need. It is intended that these regulations assist in maintaining an equitable balance between benefits of clean air and the economic cost of achieving clean air. More specifically, it is intended that these regulations define ambient air quality standards to be achieved and maintained and to provide for an orderly and equitable management of air quality by limiting emissions of air contaminants.

The ambient air is the air surrounding us. Ambient air quality standards determine the level of air quality in which we will live, and should be used as tools in achieving cleaner air not as a permit to degrade air quality. Polluted air can be a menace to all forms of life, and therefore, the disposal of wastes into the atmosphere must be controlled.

Ambient air quality standards are further intended to promote the most effective use of property. When the problems involved are esthetic in nature, an equitable economic balance must be achieved. When a health hazard is involved, there can be no compromise.

The requirements for limiting air borne contaminants must relate effects on men, animals, vegetation, and property to pollutant concentration at the point of contact. This, in turn, must be correlated with the source or sources. When multiple sources of a pollutant exist in an area, a limitation of the emission from each source must be exercised and the individual contribution to the total pollutant load in the area must be reduced to insure compliance with the ambient air quality standards. This is accomplished by the application of emission standards.

It is the purpose and intent of these regulations to establish contols on air contaminant emissions to the outdoor atmosphere so as to provide desirable levels of air quality in the ambient air.

An emission standard is a limit on the amount of air contaminant emitted from a source, and is intended to bring the ambient air quality levels within acceptable limits.

These regulations may be revised from time to time, as additional information on air contaminants and sources of air pollution are developed and evaluated, with the advice and consent of a majority of the Board after a Public Hearing.

(1.0) 13.0 Definitions

The following terms shall, unless the context indicates otherwise, have the following meanings:

13.1 Air Contaminant shall mean particulate matter, dust, fumes, gas, mist, smoke, vapor, or odor or any combination thereof.

13.2 Air Contaminant Source shall mean any and all sources of emission of air contaminants into the outdoor atmosphere, whether privately or publicly owned or operated, including stationary and mobile sources. Without limiting the generality of the foregoing, this terms includes all types of business, commercial, and industrial plants, works, shops, and stores, and heating and power plants, stations, buildings, and other structures of all types, including residences, apartment houses, office buildings, hotels,restaurants, schools, hospitals, churches, and other institutional buildings, automobiles, trucks, tractors, buses, and other motor vehicles, garages, vending and service locations, and stations, railroad locomotives, ships, boats, and other waterborne craft, portable fuel burning equipment, incinerators of all types, indoor and outdoor, and refuse dumps, and salvage operations.

13.3 Air Pollution shall mean the presence in the outdoor atmosphere of one or more air contaminants in sufficient quantities and of such characteristics and duration as to be injurious, or tend to be injurious to human health and welfare, plant or animal life, or to property, or which unreasonably interferes with the enjoyment of life and property or the conduct of business.

13.4 ASTM shall mean the American Society for Testing Material.

13.5 Board shall mean the Air Pollution Control Board of Knox County unless the context clearly indicates otherwise.

13.6 Continuous Monitoring shall mean the sampling and analysis of air contaminants in a continuous or timed sequence, using techniques which will adequately reflect actual emission levels or concentrations of a continuous basis.

13.7 Department shall mean the Department of Air Pollution Control of Knox County.

13.8 Director shall mean the Director of the Department of Air Pollution Control of Knox County.

13.9 Dust shall mean the solid particulate matter released into or carried in the air by natural forces, by any fuel-burning, combustion, process equipment or device, construction work, mechanical, or industrial processes.

13.10 Emissions shall mean the release of air contaminants into the outdoor atmosphere.

13.11 Equivalent Method shall mean any method of monitoring, sampling, and analyzing for an air contaminant which can be demonstrated to the Director's satisfaction to have a consistent relationship to the reference method.

13.12 Existing Source

A. Any source which was in being during any portion of the time period from October 1, 1969, up to and including July 1, 1972.

B. Any source constructed and operated under the regulations which became effective October 1, 1969, may be defined as an existing source only until June 30, 1975.

13.13 Fuel-Burning Equipment shall mean any equipment, device, or contrivance and all appurtences thereto, in which fuel is burned for the primary purpose of producing thermal energy and in which the material being heated is not contacted by, and adds no substance to, the products of combustion.

13.14 Fugitive Dust shall mean any visible emission, other than water droplets, issuing from any source other than through a stack.

13.15 Hand-Fired, Fuel-Burning Equipment shall mean fuel burning equipment in which fossil fuel is manually introduced into the combustion chamber or onto the fire.

13.16 Hazardous Air Contaminant shall mean any air contaminant which any cause or contribute to an increase in mortality or an increase in serious irreversible, or incapacitating, reversible illness and has been so designated by the Director.

13.17 Incinerator shall mean any equipment, device, or contrivance, or combustion device specifically designed for destruction by burning of solid, semi-solid, liquid, or gaseous combustible waste and from which the solid residues contain little or no combustible material.

13.18 Mechanical Fuel-Burning Equipment shall mean fuel-burning equipment incorporating means by which fuel is mechanically introduced into the combustion chamber.

13.19 Multiple Chamber Incinerator shall mean an incinerator consisting of three or more refractory lined combustion furnaces in a series physically separated by refractory walls interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned.

13.20 New Source shall mean any source which results from equipment that is constructed after the effective date of these regulations.

13.21 Non-Process Emissions shall mean all emissions that are not defined in Section 13.27.

13.22 Opacity is the property of a substance causing to obscure vision and is measured in terms of percent obscuration. As used in these regulations it does not include obscuration of vision due to uncombined water droplets. The percentage opacity of a plume is numerically equal to twenty (20) times the Ringelmann number for a plume of black smoke having equivalent capacity of obsuration.

13.23 Odor shall mean that property of material that affects the sense of smell.

13.24 Open Burning shall mean the unconfined burning of combustible material where no equipment has been provided or used for the control of air for combustion.

13.25 Particulate Matter shall mean any material except uncombined water that exists in a finely divided form as a liquid or a solid at standard conditions.

13.26 Person shall mean any individual, owner, operator, firm, partnership, co-partnership, company, corporation, association, joint stock company, trust, State, political subdivision, or any other legal entity or their legal representative, agent, or assigns.

13.27 Process Emissions shall mean any emission of air contaminants to the outdoor atmosphere other than that from fuel-burning equipment, an incinerator, or open burning.

13.28 Process Emission Source shall mean one or more units of processing equipment which may be operated independently of other parts of the operations at any given manufacturing or processing facility; also, where it is common practice to group more than one unit of like or similar processing equipment together and to apply a single or combined unit of air pollution control equipment to the emissions of the enire group, such group of units shall be construed as a process emission source.

13.29 Process Weight shall mean the total weight of all materials introduced into any process emission source that may cause any emission of air contaminants into the outdoor atmosphere. Solid fuels charged are considered as part of the process weight, but liquid and gaseous fuels and combustion air are not.

13.30 Process Weight Rate shall mean a rate established as follows:

A. For continuous or long-run, steady-state, operations; it is the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

B. For cyclical or batch source operations, it is the total process weight for a period which covers a complete or integral number of cycles, divided by the hours of actual process operation during such period.

C. Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this definition, that interpretation which results in the minimum value for allowable emissions shall apply.

13.31 Reference Method shall mean a method of monitoring, sampling, and analyzing for air contaminants as described in these regulations.

13.32 Refuse shall mean the inclusive term for solid waste products which are composed wholly or partly of such materials as garbage, sweepings, cleanings, trash, rubbish, litter, industrial, solid, or domestic solid waste; trees or shrub trimmings, grass clippings; brick, plaster, or other waste resulting from the demolition, alteration, or construction of buildings, or structures, accumulated waste material, cans, containers, tires, junk, or other such substances.

13.33 Ringelmann Chart shall mean the chart published and described in the U. S. Bureau of Mines Information Circular No. 8333.

13.34 Salvage Operation shall mean any business, trade, or industry engaged in whole or in part in reclaiming one or more items of value.

13.35 Smoke shall mean small gasborne particles resulting from incomplete combustion, consisting predominantly, but not exclusively, of carbon and other combustible material. It does not include vapor or water droplets.

13.36 Stack shall mean any chimney, flue, duct, conduit, exhaust, vent, or opening of any kind whatsoever capable of or used for the emission of air contaminants.

13.37 Suspended Particulates shall mean particulate matter which may tend to remain suspended in air for an appreciable period of time.

13.38 Source shall mean any property, real or personal, which emits or may emit air contaminants into the outdoor atmosphere.

13.39 Standard Condition unless otherwise specified shall mean a dry gas temperature of 70^{o} F. and a gas pressure of 14.7 pounds per square inch absolute.

(4.0) 14.0 Ambient Air Quality Standards

Ambient Air Quality Standards as given in Table I are applicable throughout Knox County. These ambient air quality standards shall not be construed, applied, or interpreted to allow any deterioration of the existing air quality in any portion of the county.

Primary Ambient Air Quality Standards define levels of air quality believed adequate, with an appropriate margin of safety, to protect the public health.

Secondary Ambient Air Quality Standards define levels of air quality believed adequate, with an appropriate margin of safety, to protect public welfare from any known or anticipated adverse effects of the pollutant.

14.1 Multiple Air Contaminant Source

In an area where an additive effect occurs from the accumulation of air contaminants from two or more sources such that the level of air contaminants exceeds the ambient air quality standards established by the Knox County Air Pollution Control Board, and each source is emitting no more than the allowed limit for an air contaminant for a single source, further reduction of emissions from each source shall be made as determined by the Director with the advice and consent of the Board.

14.2 Single Air Contaminant Source

In an area where an additive effect occurs from the accumulation of a single air contaminant source such that the level of air contaminants exceeds the ambient air quality standards established by the Knox County Air Pollution Control Board, further reduction of emissions from such air contaminant source shall be made as determined by the Director with the advice and consent of the Board.

TABLE I

Knox County Ambient Air Quality Standards for Suspended Particulates, Sulfur Dioxide, Carbon Monoxide, Photochemical Oxidants, Non-Methane Hydrocarbons, and Nitrogen Dioxide.

Contaminant	Primary Standard			Secondary Standard		
	Concentration		Averaging Interval	Concentration		Averaging Interval
	$\mu g/m^3$	ppm by vol.		$\mu g/m^3$	ppm by vol.	
Suspended Particulates	75	--	AGM	60	--	AGM
	260	--	24 hr.	150	--	24 hr.
Sulfur Dioxide	80	0.03	AAM	60	0.02	AAM
	365	0.14	24 hr.	360	0.138	24 hr.
				1,300	0.50	3 hr.
Carbon Monoxide	10,000	9.0	8 hr.	10,000	9.0	8 hr.
	40,000	35.0	1 hr.	40,000	35.0	1 hr.
Photo-Chemical Oxidants	160	0.08	1 hr.	160	0.08	1 hr.
Hydro-Carbons (non-methane)	160	0.24	3 hr. a.m.	160	0.24	3 hr. a.m.
Nitrogen Dioxide	100	0.05	AAM	100	0.05	AAM

NOTES:
1. All values other than annual values are maximum concentrations not to be exceeded more than once per year.
2. PPM (parts per million) values are approximate only.
3. All concentrations relate to air at conditions of 25° C. temperature and 760 millimeters of mercuary pressure.
4. $\mu g/m^3$ - micrograms per cubic meter.
5. AGM - annual geometric mean.
6. AAM - annual arithmetic mean.
7. a.m. - from the period beginning 12 midnight ending at 12 noon.

(2.0) 15.0 Prohibitions of Air Pollution

After the effective date of these Regulations, the General Prohibitions shall apply.

15.1 General

No person owning, leasing, or controlling the operation of any potential air contaminant source shall willfully, negligently, or through failure to provide necessary equipment or facilities or to take necessary precautions, permit the emission from said potential air contaminant sources as will tend to cause a condition of air pollution.

15.2 Circumvention

No person shall use any plan, activity, device, or contrivance which the Director determines will, without resulting in actual reduction of air contaminants, conceal or appear to minimize the effects of an emission which would otherwise constitute a violation of these Regulations. Air introducted for dilution purposes only is considered a circumvention of the Regulations.

15.3 Nuisance Clause

No person shall discharge from any source whatsoever such quantities of air contaminants or other materials which cause or have a tendency to cause injury, detriment, annoyance, or adverse effect to the public.

15.4 Traffic Hazard

No person shall discharge from any source whatsoever such quantities of air contaminants, uncombined water, or other materials which cause or have a tendency to cause a traffic hazard or an interference with normal means of public transportation.

15.5 Regulation of Hand-Fired, Fuel-Burning Equipment

After October 1, 1972, no person shall operate any hand-fired solid fossil fuel-burning equipment of a capacity in excess of that needed for heating a building consisting of two (2) or less dwelling units. After July 1, 1975, no person shall operate any hand-fired solid fossil fuel-burning equipment.

15.6 The burning of refuse in any type of fuel-burning equipment, including, but not restricted to, indoor and outdoor fire places; is prohibited except in equipment specifically designed to burn refuse.

15.7 The giving of false information in any form to the Department is prohibited. This includes, but is not limited to emission data, complaints, and other information given voluntarily or required by the Department.

(51.13) 16.0 Open Burning

16.1 Open Burning Prohibited

After the effective date of these regulations, no person shall cause, suffer, allow, or permit open burning except as specifically permitted in this Section.

16.2 Exceptions to Open Burning - Without Permit

Permits are not required for the following:

1. Open fires used in the preparation of food for human consumption.
2. Open fires used for ceremonial purposes.
3. Outdoor barbeques.

16.3 Exceptions to Open Burning - With Permit

Open burning may be allowed when a valid permit has been obtained from the Department for the following purposes prior to the initiation of the open burning provided no land, air, or water traffic hazzard is created.

1. Open burning may be conducted on farm land to clear of material grown on that land where the land is used for agricultural purposes and will continue to be used for agricultural purposes.

2. Open fires may be set for the training and instruction of public or private fire-fighting personnel.

16.4 Open Burning Conditions - With Permit

A. All open burning shall be between the hours of 9:00 a.m. and 3:00 p.m. or as authorized by the Department.

   1. All vestiges of open burning shall be non-existent in the air no later than 4:00 p.m.

   2. Under adverse meteorological or whether conditions as determined by the Director, all permits shall be invalid and no open burning shall be allowed.

   3. The possession of an open burning permit granted by the Department does not relieve any person having such a permit of the responsibility of obtaining any other permit from any other agency.

   4. Permits are only valid for one (1) day and the effective date for open burning shall appear on the permit form.

(50.1.2) 17.0 Regulation of Visible Emissions

17.1 Visible Emissions Prohibited - Stationary Sources

After the effective date of these regulations, no person shall cause, suffer, allow, or permit discharge from any single source visible emissions of a density darker than No. 1 on the Ringelmann Chart or of an opacity in excess of 20 percent.

17.2 Visible Emissions Prohibited - Mobile Sources

A. After the effective date of these regulations, no person shall cause, suffer, allow, or permit any visible emissions from gasoline-powered motor vehicles except for a period not exceeding five (5) consecutive seconds.

B. After the effective date of these regulations, no person shall cause, suffer, allow, or permit any visible emissions of a shade or density darker than No. 1 on the Ringelmann Chart or 20 percent opacity except for periods not exceeding five (5) consecutive seconds for diesel-powered motor vehicles.

17.3 Exceptions

A. Visible emissions consisting of uncombined water droplets, unless in the opinion of the Director, the water droplets cause air pollution.

B. Section 17.1 shall not apply until July 1, 1975, to fossil fuel-burning equipment used exclusively for heating the dwellings occupied by two or less family units.

C. Visible emissions from any source may be permitted during the cleaning of a fire, the building of a new fire, or the blowing of soot from boilers; the density of which is not darker than No. 2 on the Ringelmann Chart or of an opacity in excess of 60 percent for a period aggregating no more than five (5) minutes in any 60 consecutive minutes or more than twenty (20) minutes in any 24-hour period.

D. These exceptions apply only to visible emissions from fuel-burning sources used to provide space heating or in production of process steam.

(50.0) 18.0 Regulation of Non-Process Emissions

18.1 Non-Process Emission Standards

On or after the effective date of these regulations, no person shall cause, suffer, allow, or permit non-process emissions in excess of the standards set forth in this section.

18.2 Non-Process - Particulate Emissions

A. On or after the effective date of these regulations, no person shall cause, suffer, allow, or permit discharge of particulate emissions into the atmosphere from any new source in excess of that shown in Fiquire 1.

B. On or after October 1, 1972, no person shall cause, suffer, allow, or permit discharge of particulate emissions from any existing source into the atmosphere in excess of those shown in Table 1.

C. On or after July 1, 1975, all sources shall meet the particulate emission standards in Figure 1.

18.3 Gaseous Non-Process Emissions

A. On or after the effective date of these regulations, no person shall cause, suffer, allow, or permit gaseous emissions in excess of the standards as specified in this section.

B. Any person constructing or otherwise establishing air contaminant sources emitting gaseous air contaminants after the effective date of these regulations shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.

18.4 Sulfur Oxide Emissions Standards

A. No person shall cause, suffer, allow, or permit the emission from any existing air contaminant source in operation or under construction prior to the effective date of these regulations gases containing more than 2,000 parts per million (0.2 percent by volume - dry basis) of sulfur oxides calculated as sulfur dioxide (SO_2) after October 1, 1972.

B. No person shall cause, suffer, allow, or permit the emission from any air contaminant source constructed after the effective date of these regulations gases in excess of 620 parts per million (0.062 percent by volume - dry basis) of sulfur oxides calculated as sulfur dioxide (SO_2). This allowable emission standard must be attained at the time such new air contaminant source begins operation. After July 1, 1975, all sources shall meet the emission standards of 620 parts per million for sulfur oxides.

FIGURE 1
MAXIMUM ALLOWABLE PARTICULATE EMISSIONS FROM NON-PROCESS INSTALLATIONS

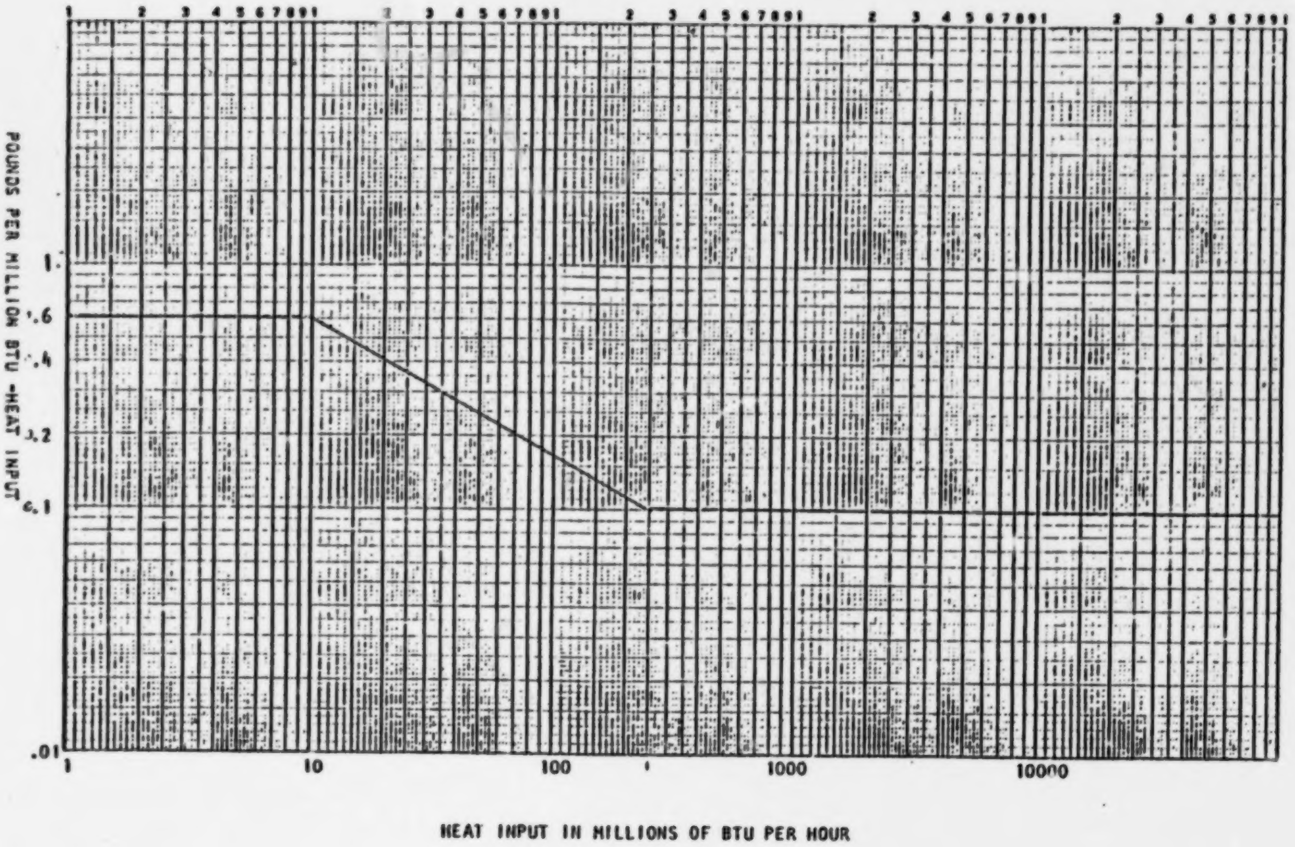


TABLE I

MAXIMUM PARTICULATE EMISSIONS FROM NON-PROCESS INSTALLATIONS

Total Heat Input in Million BTU Per Hour	Maximum Emissions in Pounds Per Million BTU Per Hour
10 and Less	0.60
50	0.46
100	0.40
500	0.30
1,000	0.26
2,500	0.23
5,000	0.20
7,500	0.19
10,000 and Over	0.18

Interpolation of the date in this table shall be accomplished by use of the equation E=0.895H-0.174 be accomplished where E=emitted pounds per million BTU per hour, and H=total heat input in million BTU per hour.

18.5 Total Emission

A. The total non-process emissions from all sources at any one location shall be used for determining the maximum allowable emissions into the atmosphere.

(50.1.1) 19.0 Regulation of Process Emissions

19.1 Process Emission Standards

On or after the effective date of these regulations, no person shall cause, suffer, allow, or permit process emissions into the atmosphere in excess of the standards of this section.

19.2 Process Emissions

A. On or after the effective date of these regulations, no person shall cause, suffer, allow, or permit discharge of process emissions from any new source into the atmosphere in excess of those levels shown in Table II.

B. On or after October 1, 1972, no person shall cause, suffer, allow, or permit discharge of process emissions from any existing source into the atmosphere in excess of those levels shown in Table III.

C. On or before July 1, 1975, all sources shall meet the process emission rates as set forth in Table II.

19.3 Gaseous Process Emissions

A. On or after the effective date of these regulations, no person shall cause, suffer, allow, or permit gaseous emissions in excess of the standards in this section.

B. Any person constructing or otherwise establishing an air contaminant source emitting gaseous air contaminants after the effective date of these regulations, shall install and utilize the best equipment and technology currently available for controlling such gaseous emissions.

19.4 Sulfur Oxide Emission Standards

A. No person shall cause, suffer, allow, or permit the emission from any existing air contaminant source in operation or under construction prior to the effective date of these regulations gases containing more than 2,000 parts per million (0.2 percent by volume - dry basis) of sulfur oxides calculated as sulfur dioxide (SO_2) after October 1, 1972.

B. No person shall cause, suffer, allow, or permit the emission from any air contaminant source constructed after the effective date of these regulations gases in excess of 500 parts per million (0.05 percent by volume - dry basis) of sulfur oxides calculated as sulfur dioxide (SO_2). This allowable emission standard must be attained at the time such new air contaminant source begins operation. After July 1, 1975, all sources shall meet the emission standards of 500 parts per million for sulfur oxides.

19.5 Total Emissions

The total process emissions from all sources at any location shall be used for determining the maximum allowable emissions to the atmosphere.

TABLE II

NEW PROCESS EMISSION SOURCES
ALLOWABLE RATE OF EMISSION BASED ON TOTAL PROCESS WEIGHT RATE [a]

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr.	Lb/Hr.	Lb/Hr.	Tons/Hr.	Lb/Hr.
50	0.025	0.03	16,000	8.00	13.0
100	0.05	0.55	18,000	9.00	14.0
200	0.10	0.86	20,000	10.	15.0
400	0.20	1.32			
600	0.30	1.70	30,000	15.	19.2
800	0.40	2.03	40,000	20.	23.0
1,000	0.50	2.34	50,000	25.	26.4
1,500	0.75	3.00	60,000	30.	29.6
2,000	1.00	3.59	70,000	35.	30.6
2,500	1.25	4.12	80,000	40.	31.2
3,000	1.50	4.62	90,000	45.	31.8
3,500	1.75	5.08	100,000	50.	32.4
4,000	2.00	5.52	120,000	60.	33.3
5,000	2.50	6.34	140,000	70.	34.2
6,000	3.00	7.09	160,000	80.	34.9
7,000	3.50	7.81	200,000	100.	36.1
8,000	4.00	8.5	1,000,000	500.	46.7
9,000	4.50	9.1			
10,000	5.00	9.7			
12,000	6.00	10.9			

[a] Interpolation of the data in Table 2 for the process weight rates up to 60,000 lbs/hr shall be accomplished by the use of the equation:

$$E = 3.59\ P^{0.62} \qquad P\ 30\ \text{tons/hr}$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs/hr shall be accomplished by use of the equation:

$$E = 17.31\ P^{0.16} \qquad P\ 30\ \text{tons/hr}$$

Where: E = Emissions in pounds per hour
P = Process weight rate in tons per hour

TABLE III

EXISTING PROCESS EMISSION SOURCES
ALLOWABLE RATE OF EMISSION BASED ON
TOTAL PROCESS WEIGHT RATE [a]

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr.	Tons/Hr.	Lb/Hr.	Lb/Hr.	Tons/Hr.	Lb/Hr.
100	0.05	0.551	16,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.0	19.2
600	0.30	1.83	30,000	15.	25.2
800	0.40	2.22	40,000	20.	30.5
1,000	0.50	2.58	50,000	25.	35.4
1,500	0.75	3.38	60,000	30.	40.0
2,000	1.00	4.10	70,000	35.	41.3
2,500	1.25	4.76	80,000	40.	42.5
3,000	1.50	5.38	90,000	45.	43.6
3,500	1.75	5.96	100,000	50.	44.6
4,000	2.00	6.52	120,000	60.	46.3
5,000	2.50	7.58	140,000	70.	47.8
6,000	3.00	8.56	160,000	80.	49.0
7,000	3.50	9.49	200,000	100.	51.2
8,000	4.00	10.4	1,000,000	500.	69.0
9,000	4.50	11.2	2,000,000	1,000.	77.6
10,000	5.00	12.0	6,000,000	3,000.	92.7
12,000	6.00	13.6			

[a] Interpolation of the date in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E = 4.10\ p^{0.67}$ and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$E = 55.0p^{0.11} - 40$, where E = rate of emission in lb/hr

and p = process weight rate in tons/hr.

(51.9) 20.0 Regulation of Incinerators

20.1 Prohibitions

A. On or after October 1, 1972, no incinerator shall be installed or operated except multiple chamber incinerators equipped and operated as follows or as required by the Director:

1. Comply with emission standards as set forth in Table Iv.

2. No person shall construct an incinerator have a charging rate of 100 pounds or less per hour.

3. It is provided with an auxiliary burner for purposes of maintaining a temperature of at least 800° F. in the primary combustion chamber.

4. It has a secondary burner to destroy smoke and/or odors.

5. It is a type of incinerator design that can be demonstrated to the Director to be effective in accordance with all provisions of this Section. The burden of proof shall rest upon the owner of the proposed incinerator.

6. Any other provisions of this Section, not withstanding, no person shall operate an incinerator used for the disposal of refuse producted by fewer than 51 families.

7. No person shall make any repairs or alterations to an incinerator which will cost more than 20% of the replacement cost of the incinerator unless such repairs or alterations will result in a final installation which will meet the requirements of these regulations for incinerators.

8. Incinerators having a minimum charging rate of 100 to 600 pounds per hour shall be used for incineration of Type 0 and Type 1 waste exclusively as defined as follows:

    a. Type 0 - trash, a mixture of highly conbustible waste such as paper, cardboard, cartons, wood boxes, and combustible floor sweepings from commercial and industrial activition. This mixture shall not contain oily rags, rubber scraps, or any putresible matter. This type of waste shall not contain more than 10% moisture or 5% noncombustible solids.

b. Type I - trash, a mixture of highly combustible waste such as paper, cardboard, cartons, wood boxes, and combustible floor sweepings from commercial and industrial activities. This mixture shall not contain oily rags, rubber scraps, or any putresible matter. This type of waste shall not contain more than 25% moisture or 10% non-combustible solids.

9. The burning of plastics in any form shall not be permitted in any incinerator having a charging rate of 600 pounds or less per hour.

B. On or before October 1, 1972, all existing incinerators shall meet the standards for particulate emissions as set forth in column B, Table IV.

C. On or after the effective date of these regulations, all new incinerators shall meeet the particulate emissions standards as set forth in column A, Table IV.

D. On or before July 1, 1975, all incinerators shall meet the new particulate emission standards as set forth in column A, Table IV.

E. On or before July 1, 1975, all incinerators shall be equipped with the latest atuomatic control devices as prescribed by the Director.

F. The minimum charging rate of 100 pounds per hour shall not apply to pathological incinerators.

TABLE IV

MAXIMUM ALLOWABLE PARTICULATE EMISSION STANDARDS FOR INCINERATORS

Rated or Operating Charging Rate in Pounds Per Hour	Emission Standard in Percent of Charging Rate	
	A	B
	New Incinerator	Existing Incinerator
100 to 199	0.2	0.6
200 to 599	0.2	0.4
600 to 6,000	0.075	0.4
Greater than 2,000	0.075	

(50.6) 21.0 Regulation of Odors

21.1 Objectionable Odors

After the effective date of these regulations, no person shall cause, suffer, or allow any emissions of gases, vapors, or "objectionable" odors beyond the property line from which such emissions occur, to be in sufficient quantities and of such characteristics and duration as to be injurious, or tend to be injurious to human health and welfare, plant or animal life, or to property, or which unreasonably interferes with the enjoyment of life or property.

21.2 Determination of Objectionable Odors

An odor shall be deemed "objectionable" when 30% or more of the people exposed to it believe it to be objectionable in their usual places of occupancy based on a sample size of at least 20 people; and if fewer than 20 are exposed, 75% must believe it to be objectionable, or when air occurring beyond the property line contains such odorous matter as may be detectable when diluted with eight or more volumes of odor-free air.

21.3 Compliance Schedule

When an odor shall have been deemed objectionable in acceptable proposal shall be submitted to the Director for the control of the objectionable odor. The proposal shall contain an acceptable method and timetable for compliance.

(50.1) 22.0 Regulation of Fugitive Dust and Materials

22.1 On or after the effective date of these regulations, no person shall cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:

A. Use, where possible, water or chemicals for control of dust or materials in demolition of existing buildings or structures, construction operations, grading of roads, or the clearing of land:

B. Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stock piles, and other surfaces which can create airborne dusts or materials:

C. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations.

D. Covering at all times, when in motion, open bodied trucks transporting materials likely to become airborne.

E. The paving of roadways and their maintenance in a clean condition.

F. The prompt removal of earth and other materials from paved streets in which earth or other materials have been transported by trucking or earth moving equipment, erosion, water, or other means.

G. When dust, fumes, gases, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any regulation, the Director may order that the building or equipment in which processing, handling, and storage are done be tightly closed, ventilated in such a way that all air and gases or gas-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air.

(50.4) 23.0 Regulation of Hydrocarbon Emissions

For the purpose of this Section, volatile organic compounds shall mean any compound containing carbon and hydrogen or containing carbon and hydrogen in combination with any other element which has a vapor pressure of 1.5 pounds per square inch absolute (77.6 mm. Hg) or greater under actual storage conditions.

23.1 Storage of Volatile Organic Materials

On or after July 1, 1975, no person shall place, store, or hold in any stationary tank, reservoir or other container of more than 40,000 gallons capacity any volatile organic compounds unless such tank, reservoir, or other container is a pressure tank capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the atmopshere or is designed, and equipped with one of the following vapor loss control devices:

A. A floating roof consisting of a pontoon type, double deck type roof or internal floating cover, which will rest on the surface of the liquid contents and be equipped with a closure seal or seals to close the space between the roof edge and tank wall. This control equipment shall not be permitted if the volatile organic compounds have a vapor pressure of 11.0 pounds per square inch absolute or greater under actual storage conditions. All tank gauging or sampling devices shall be gas-tight except when tank gauging or sampling is taking place.

B. A vapor recovery system consisting of a vapor gathering system capable of collecting the volatile organic compound vapors and gases discharged and a vapor disposal system capable of processing such volatile organic vapors and gases so as to prevent their emission to the atmosphere and with all tank gauging and sampling devices gas-tight except when gauging or sampling is taking place.

(50.1) 24.0 Regulation of Airborne and Windborne Materials

24.1 Prohibitions

A. On or after the effective date of these regulations, no person shall cause or permit the handling, transporting, or disposition of any substance or material which is likely to be scattered by the air or wind, or is susceptible to being airborne or windborne; or to operator or maintain or cause to be operated, maintained on any premise, open area, right-of-way, storage pile of materials, vehicle, or construction, alteration, demolition, or wrecking operation, or any other enterprise which involves any material or substance likely to be scattered by the wind or air or susceptible to being windborne or airborne, without taking adequate precautions or measures to minimize emission of any air contaminants.

(3.0) 25.0 Permits

25.1 Construction Permit

A. On or after the effective date of these regulations, no person shall begin the construction of a new source or the modification of an existing source, which may result in the discharge of air contaminants without first having applied for and received from the Director a construction permit for the construction or modification of such source.

B. The Director shall not approve such construction or modification unless the applicant demonstrates to the satisfaction of the Director that the source can be expected to comply with the applicable regulations. The Director shall not approve such construction or modification permit if such construction or modification interferes with the attainment of maintenance of the secondary ambient air quality standares as set forth in these regulations.

C. Any person responsible for the construction or modification of a potential air contaminant source shall obtain, on forms furnished by the Department, a valid Construction Permit. All Construction Permits shall be for a period of up to but not exceeding one (1) year as determined by the Department. All Construction Permits shall be renewed annually or at such time as the permit expires. All inspection of the source may be conducted by the Department. All applicants for a Construction Permit shall pay a fee as determined by the Director with the advice and consent of the Board. Any violation of these Regulations shall invalidate the Permit. Upon compliance with these Regulations, it shall be necessary to apply for a new Construction Permit.

25.2 Applications for Permit

A. The application for a construction permit shall be made on forms available from the Director within ninety (90) days prior to the estimated starting date of construction. The Director shall act on all applications for a construction permit within 90 days.

B. In the event the requirement for a construction permit prior to the construction of a new source or the modification of any existing source will create an undue hardship on the applicant, the applicant may request of the Director a waiver to proceed with construction or modification prior to the issuance of a Construction Permit. The applicant for a waiver shall explain the circumstances which will cause such undue hardship. If a waiver is granted, the applicant shall, as soon as reasonably practical, submit a report containing such information as would have otherwise been required in filing for a construction permit. The applicant, after a waiver is granted, proceeds at his own risk; and if after contruction or modification has begun or been completed, the proposed or completed installation does not meet with the Director's approval, alterations required to effect such approval shall be made within reasonable time as specified by the Director. In no case shall this reasonable time exceed 180 days after notification that the construction or modification does not meet with the Director's approval.

C. Construction Permits issued under this section are based on the control of air contaminants only and do not in any way affect the applicant's obligation to obtain necessary permits from other governmental agencies.

25.3 Operating Permit

A. Any person planning to operate a source constructed or modified in accordance with a construction permit issued by the Director, in section 25.1, shall apply for and receive an Operating permit from the Director.

B. When the emissions from an air contaminant source regulated herein in existence on or before the effective date of these regulations exceeds the maximum allowable for such emissions as defined in these regulations, the owner or operator thereof shall, in addition to any other information required by the Director and before an Operating permit for such existing source will be issued by the Director, file a plan for the reduction of such emissions. Such plan shall include a time schedule for the accomplishment of such reductions and the final date for completion shall be not later than the date required for achieving a reduction to the maximum emission level.

Those existing air contaminant sources which must be in compliance with the applicable emission standards by October 1, 1972, shall have filed by April 1, 1970, or at such time thereafter as requested by the Director, a compliance plan for the reduction of such emissions to the extent that the emissions do not exceed the maximum allowable emissions.

Those air contaminant sources which must be in compliance with the applicable emission standards by July 1, 1975, must file by January 1, 1973, a compliance plan for the reduction of such emissions to the extent that the emissions do not exceed the maximum allowable emissions.

1. As a minimum the following information shall be included for each source: total weight of contaminant released per day; period or periods of operation; composition of the contaminant, temperature and moisture content of the air or gas stream in which the contaminant is contained; characterization of the variability of contaminant release with respect to rate, composition and physical characteristics; height, velocity and direction of air or gas stream at the point where released to the atmosphere and such other information as may be specifically required by the Director. All such information shall be submitted on forms available from the Director. Where an air or gas cleaning device is incorporated in the air or gas stream preceding discharge to the atmosphere, the weight of material removed by the cleaning device, as well as the weight emitted, shall be stated.

2. Each compliance plan must provide for periodic increments of progress townards compliance. The dates for achievement of such increments shall be specified. Increments of progress shall include be not be limited to: letting of necessary contracts for construction or process charges, if applicable; initiation of construction, completion and startup of control system; performance tests; and submittal of performance test analysis and results.

3. Any owner or operator required to submit a compliance schedule pursuant to this paragraph shall, within 10 days after the deadline for each increment of progress, certify to the Director whether or not the required increment of the approved compliance schedule has been met.

4. Any person responsible for a potential air contaminant source shall obtain, on forms furnished by the Department, a valid Operating Permit. All Operating Permits shall be for a period of up to but not exceeding one (1) year as determined by the Department. All Operating Permits shall be renewed annually or at such time as the permits expires. An inspection of the source may be conducted by the Department. All applicants for an Operating Permit shall pay a fee as determined by the Director with the advice and consent of the Board. Any violation of these regulations shall invalidate the Permit. Upon compliance with these Regulations, it shall be necessary to apply for a new Operating Permit. The Director shall not approve such operating permit if such operation interferes with the attainment or maintenance of the secondary ambient air quality standards as set forth in these regulations.

C. Application for an Operating Permit shall be made on forms available from the Department and signed by the applicant. Such application for an Operation Permit shall be filed with the Director within thirty (30) days prior to the expiration of an existing Operation Permit. The Director shall act on all applications for an operating permit within 30 days.

D. The Operating Permit shall only be issued on evidence satisfactory to the Director that the operation of said source is in compliance with any standards or regulations adopted by the Board. Such evidence may include a requirement that the applicant conduct such tests as are necessary in the opinion of the Director to determine the kind or amount of air contaminants emitted from the equipment or control apparatus. Standard Operating Permits shall be valid for a period of one (1) year or for such longer period of time as the Director may designate. A permit issued for a period of less than one (1) year shall be designated as a temporary permit.

E. Any person in possession of an Operating Permit shall maintain said Operating Permit readily available for inspection by the Director or his designated representative on the operating premises.

F. Operation of each source shall be in accordance with the provisions and stipulations set forth in the Operating Permit.

G. An Operating permit is not transferable from one person to another person, from one source to another source, or from one location or facility to another location or facility.

H. The Director may suspend or revoke either a construction or operating permit if the permit holder fails to comply with the provisions, stipulations, or compliance schedules specified in the permit. Upon permit revocation, if the permit holder fails to take remedial action, he shall become immediately subject to enforcement actions prescribed in these regulations.

25.4 Compliance Schedule

A. Irrespective of any of the provisions of these regulations, the owner or operator of any air contaminant source shall be responsible for complying with emission regulations as contained in these regulations at the earliest practicable time and for this purpose the Director shall have the authority and responsibility to require compliance with these regulations at an earlier date than indicated where such earlier compliance may reasonable be accomplished. Where compliance with any of these regulations requires a time schedule greater than 18 months from the effective date of these regulations, an acceptable progress report shall be filed with the Director at least 30 days from date of issuance.

25.5 Reporting of Information

No person shall cause or permit the operation of any source without furnishing such performance tests results, information, and records as may be required by the Director in accordance with the applicable rules and regulations. The granting of a permit of any form shall not be construed by that person having such a permit as a license to violate any part of these regulations.

25.6 Exemptions

A. Mobile sources such as: autombiles, trucks, buses, locomotives, planes, boats, and ships.

B. Particulate emissions from a single stack, or an air contaminant source, discharging less than 0.5 pounds per hour of non-hazardous particulates or the total particulate emissions from an air contaminant source amounting to less than two (2) pounds per hour of non-hazardous particulates, whichever is the more restrictive.

C. Equipment used on farms for soil preparation, tending, or harvesting of crops or the preparation of feed to be used on the farm where prepared.

D. A construction or operating permit shall not be required for one and two family dwelling units.

E. A construction or operating permit shall not be required for the operations regulated by Section 17.0, Open Burning. However, a permit shall be required for the use of an air curtain destructor and any similar device for the disposal of waste.

F. Nothwithstanding the exemptions granted in the sections above, no person shall dishcarge, from any source whatsoever, such quantities of air contaminants or other materials which cause or have a tendency to cause injury, detriment, annoyance, or adverse effect to the public.

25.7 Payment of Fees

All person requesting a construction permit or operating permit shall pay a fee as determined by the Director with the advice and consent of the Board.

(9.0) (13.0) 26.0 Monitoring, Recording, and Reporting

26.1 Installation of Monitoring Equipment

The Director may require the owner or operator of any air contaminant source to install, use, and maintain such monitoring equipment; sample such emissions in accordance with methods as the Director shall prescribe; and make such periodic emission reports as may be required.

26.2 Filing of Records and Reports

Records and reports as the Director shall prescribe on air contaminants or the quality or quantity of fuel used shall be recorded, compiled, and submitted on forms prescribed by the Department. The procedures below are examples of such requirements:

A. Emissions of particulate matter, sulfur dioxide, and oxides of nitrogen shall be expressed as follows: in pounds per hour and pounds per million B.T.U. of heat input for fuel-burning equipment; in pounds per 100 pounds of refuse burned for incinerators, and in pounds per hourly process weight of production rate or in terms of some other easily measured and meaningful process unit specified by the Director.

B. Sulfur dioxide and oxides of nitrogen emission data shall be averaged over a 24-hour period and shall be summarized monthly. Daily averages and monthly summaries shall be submitted to the Director biannually. Data shall be calculated daily and available for inspection at any time.

C. Particulate matter emissions shall be sampled and analytical data submitted semi-annually.

D. Visible emissions shall be monitored continuously and records kept indicating total minutes per day in which emissions occur.

E. The sulfur content of fuels, as burned, except natural gas, shall be determined in accordance with current, recognized ASTM procedures. Daily and monthly averages shall be available for inspection.

26.3 Filing of Emission Date and Registration

If shall be the responsibility of persons operating air contaminant sources to obtain from the Department any necessary forms for the filing of any required information such as, but not limited to, permits, registration, emission data, or any other forms.

A. The person responsible for any air contaminant source in existence on October 1, 1969, shall within one (1) year of the date, or at such time as requested, have filed with the Director information as would be needed or useful in evaluating the potential of the source for causing air pollution.

B. The following information may be included for each source; total weight of the contaminant released per day; period or periods of operation; composition of the contaminant; physical state of the contaminant; temperature and moisture content of the air or gas stream at the point where released into the atmosphere, and such other information as may be specifically requested by the Department.

Where an air or gas-cleaning device is incorporated in the air or gas stream preceding discharge to the atmosphere, the weight of material removed by the cleaning device, as well as the weight emitted, shall be stated.

26.4 Sampling Required - Establishment of Air Contaminant Emission Levels

A. New Facilities

1. There shall be provided for any stack or duct adequate sampling facilities as follows:

   a. Sampling ports of a size, number, and location as the Director may require.

   b. Safe access to each port.

   c. Such other sampling and testing facilities as the Director may require.

2. The Director may be at his discretion require the applicant for an operating permit to conduct or have conducted such tests as are necessary to establish the amount of air contaminants emitted from such equipment or control apparatus. Such tests shall be made at the expense of the applicant and shall be conducted in a manner approved by the Director. The Director may require that such tests be conducted in the presence of his representative.

B. Existing Facilities

1. Whenever the Director has reason to believe that the emission limits of the regulations set forth herein are being violated, he may require the person to conduct

or have conducted at the person's expense, tests to determine the emission level of specific air contaminants. The Director may require that such tests be conducted in the presence of his representative.

2. The Director may conduct tests of air contaminant emissions from any source. Upon request of the Director, the person responsible for the source to be tested shall provide, at no expense to the Director, reasonable and necessary openings in stacks, vents, and ducts, along with safe and easy access thereto including a suitable power source to the point of testing for proper determination of the level of air contaminant emissions.

C. Periodic Testing Required

The Director may require the person responsible for the air contaminant source as a condition of his operating permit, to conduct or have conducted periodic tests to establish the amount of air contaminants emitted. The nature, extent, and frequency of such required testing shall be specified in the operating permit. Such tests shall be made at the expense of the person and shall be conducted in a manner approved by the Director. The Director shall be supplied with such data as stipulated in the operating permit.

26.5 Monitoring, Recording, and Reporting of Source Emissions

A. Monitoring of Emissions

The Director may require the person responsible for any air contaminant source discharging air contaminants at the expense of the person, to install, use, and maintain such monitoring equipment as the Director shall prescribe; sample such emissions in accordance with methods as the Director shall prescribe; establish and maintain such records; and make periodic emission reports as required.

Each person responsible for any air contaminant source, shall as prescribed by the Director, monitor, and report on specified air contaminants, develop, and submit a detailed monitoring program; and order and install sampling equipment within the following time schedule:

1. Within 60 days after designation by the Director of those air contaminants to be monitored, the person responsible for the air contaminant source shall submit a detailed monitoring program for approval by the Director.
2. Within 30 days after the monitoring program has been approved in writing by the Director, sampling and monitoring equipment shall be ordered.
3. Within 90 days after delivery of the equipment, the person responsible for the air contaminant source shall place said equipment in effective operation in accordance with its approved monitoring program.

26.6 B. Recording and Reporting

Records and reports as the Director shall prescribe on air contaminant emissions, ambient air concentrations, or fuel analyses shall be recorded, compiled, and submitted in a format prescribed by the Director.

(9.0) 27.0 Sampling and Testing Methods

27.1 General

It is explicitly implied that in addition to/and consistent with specific methods of sampling and analysis described herein, that samples shall be taken in such number, duration, and location as to be statistically significant and representative of the condition which the sample(s) purport to evaluate.

Where specific materials, equipment, or procedures are specified, it may be permissible to use other materials, equipment, or procedures where it has been reliably demonstrated that their use produces results comparable to that which would have been obtained by use of the specified materials, equipment, or procedures. All sampling and testing shall be conducted or approved by a professional engineer registered in the State of Tennessee.

27.2 Source Sampling and Analysis

The methods set forth in this section shall be applicable for determining compliance with emission standards.

A. Sample and Velocity Traverses: Sample and velocity traverses shall be determined by the method outlined in the Federal Register, Volume 36, No. 247, December 23, 1971, with this added condition:

"If traverse readings are within plus or minus 10 percent of average; 1, 2, or 3 points (corrected to average) may be used in subsequent tests, one test in three must be a traverse."

B. Stack Gas Velocity Determination: Determination of stack gas velocity (Type S Pitot Tube) shall be determined by the method outlined in the Federal Register, Volume 36, No. 247, December 23, 1971, except in such instances where Type S Pitot Tube is in applicable.

C. Gas Analysis: Gas analysis for carbon dioxide, excess air, and dry molecular weight shall be accomplished by the method outlined in the Federal Register, Volume 36, No. 247, December 23, 1971, or another type of test procedure that is direct indicating and/or recording approved by the Director.

D. Determination of Moisture in Stack Gases: Moisture shall be determined by the condenser as specified in the Federal Register, Volume 36, No. 247, December 23, 1971, or other technique approved by the Director.

E. Determination of Particulate Emissions: The basic design of the sampling train is left to the person if certain criteria are observed to assure high collection efficiency and standard analysis of the collected particulates.

1. Description of Sampling Apparatus

   a. This apparatus shall include interchangeable sampling nozzles or probes of various diameter, a filter effective for the removal of particles exceeding 0.3 micron diameter of solid or liquid, a suitable number of impingers to reduce condensible vapors to liquid or solid particulate matter, and appropriate connecting tubing at temperatures above the aqueous dewpoint of the gases. All materials of construction shall be resistant to corrosive elements in the fleu gases, e.g., SO_2, NOx, and elevated temperatures.

   b. This filter assembly shall be maintain above the aqueous dewpoint of the flue gases throughout the sampling operation. To accomplish this the filter assembly may be disposed inside the gas flue to be completely bathed by the hot gas stream; or it may be disposed outside the gas stream provided the following precautions are taken:

      1. If the filter is disposed outside the hot gas flue, a temperature indicator, e.g., thermocouple shall be provided at the same filter gas exit to monitor the flue gases at all times. Auxiliary heating elements for tubing and filter holder shall be provided to maintain specified temperatures when required.

      2. Deposits in the tube connecting the probe to the exterior filter shall be quantitatively removed by washing with a suitable liquid and by brushing, the weight of solids recovered from being added to the weight found in the filter.

   c. Provisions shall be included for cooling the gas stream to standard conditions (70^{o}F) to reduce condensible vapors to liquid or solid particulate matter, and for cooling the condensed particles including water that may be formed by condensation of water vapor in the sample. This shall be accomplished by passage through bubblers provided with an orifice submerged in water through which the gas stream passes at a velocity of approximately 100 meters per second. The bubblers should be immersed in an ice bath to minimize evaporation. A trap of suitable shape and dimension for the collection of overflow or overspray shall be provided downstream from the bubblers.

d. An indicating flowmeter shall be provided and preferably located in the train at a point preceding the source of suction, preceded by a trap to prevent condensed water from entering the flowmeter; and a vacuum gauge adjacent to the flowmeter to indicate the absolute pressure of the gas passing through the orifice meter.

e. Operation charts comprising either graphs or tables shall be prepared and be available as part of the apparatus, to indicate proper sampling rates as a function of gas density in the stack and at the flowmeter.

2. Analytical Results

Analytical results shall be accomplished as outlined in the appendix of the Federal Register, Volume 36, No. 247, December 23, 1971, for the filter catch and washings up to the filter. Inclusion or exclusion of material collected in the impinger train as "particulate matter" and method of analysis will be determined on an individual air contaminant source basis.

3. Equivalent Method

Those procedures demonstrated to yield equivalent results and approved by the Director may be used for sampling and analysis of particulate matter. Stack sampling methods promulgated by the Environmental Protection Agency for specified air contaminant sources are considered to be equivalent methods and therefore acceptable.

F. Measurement of Sulfur Dioxide in Stack Gases:

1. The approved procedures for measuring Sulfur Dioxide in stack gases are the Shell Development Company method and the Monsanto Company method.

REFERENCE: (1) Shell Development Company Method

Atmospheric Emission from Sulfuric Acid Manufacturing Processes, Public Health Service Publication 999-AP-13 (1965), Appendix B, pages 85-87.

REFERENCE: (2) Monsanto Company Method

Atmospheric Emission from Sulfur Acid Manufacturing Processes,

Public Health Service Publication 999-AP-13 (1965), Appendix B, pages 63-84.

2. Equivalent Methods: Many new and improved methods of continuous gaseous monitoring in stacks are now in use. Any method of stack sampling approved by the Director may be used in accordance with good professional practice. Stack sampling methods promulgated by the Environmental Protection Agency for specified air contaminant sources are considered to be equivalent methods and therefore acceptable.

G. Measurement of Sulfuric Acid (H_2SO_4) in Stack Gases:

1. The approved procedures for measuring sulfuric acid (H_2SO_4) in stack gases are the Shell Development Company Method and the Monsanto Company Method.

REFERENCE: (1) Shell Development Company Method

Atmospheric Emission from Sulfuric Acid Manufacturing Processes,

Public Health Service Publication 999-AP-13 (1965), Appendix B, pages 85-87.

REFERENCE: (2) Monsanto Company Method

Atmospheric Emission from Sulfuric Acid Manfacturing Processes,

Public Health Safety Publication 999-AP-13 (1965), Appendix B, pages 63-84.

2. Any method of stack sampling approved by the Director may be used in accordance with good professional practice. The stack sampling method promulgated by the Environmental Protection Agency in the *Federal Register*, Volume 36, No. 247, December 23, 1971, is considered to be an equivalent method.

(5.0) 28.0 Variances

28.1 General

A. Any person may apply to the Director for a variance from these regulations. The Director may grant such a variance for a period not to exceed (1) one year, provided:

1. The request for a variance is presented in writing.

2. The emissions occuring or proposed to occur do not endanger or tend to endanger human health or safety; or unreasonably interferes with the enjoyment of life and property.

3. Compliance with the regulations from which a variance is sought would produce serious hardship without equal or greater benefits to the public.

B. The Director shall present the request for a variance to the Board for public hearing.

C. Any variance granted within the requirements of Section 28.1 for time periods and under conditions consistent with the reasons therefore, shall be with the following limitations.

1. If the variance is granted on the grounds that there is no practicable means known or available for the adequate prevention, abatement, or control of the air pollution involved; that the variance shall be permitted only until the necessary means for prevention, abatement, or control become known and available; and that the variance shall be subject to the taking of any substitute or alternative measures that the Director may prescribe.

2. If the variance is granted on the grounds that compliance with the particular requirement or requirements from which variance is sought will necessitate the taking of measures which, because of their extent or cost, must be spread over a considerable period of time, it shall be for a period not to exceed such reasonable time as, in the opinion of the Director, is required for the taking of the necessary measures. A variance granted on the grounds specified herein shall contain a timetable for the taking of action in an expeditious manner and shall conditioned on adherence to such timetable.

D. Every applicant or petitioner requesting a variance shall pay a fee. The schedule of fees shall be based upon cost as determined by the Director with the advice and consent of the Board. All requests for a variance shall be published in a newspaper of general circulation in Knox County at least thirty (30) days prior to any action taken upon a request for a variance.

(16.0) 29.0 Appeals

29.1 General

A. Any person, if dissatisfied with the Director's decision concerning a variance, may within ten (10) days, appeal; in writing, therefrom to the Board which shall within a reasonable length of time, after public hearing, confirm, modify, or reverse the Director's decision.

B. Any other citizen of Knox County who disagrees with any ruling of the Director for any reason concerning air pollution may appeal, in writing, that ruling to the Board which shall within a reasonable length of time, after public hearing, confirm, modify, or reverse the Director's decision.

C. Every applicant or petitioner requesting an appeal shall pay a fee. The schedule of fees shall be based upon cost as determined by the Director with the advice and consent of the Board. All requests for an appeal shall be published in a newspaper of general circulation in Knox County, not less than thirty (30) days prior to any action taken upon a request of an appeal.

29.2 Public Hearing of Appeals

A. Hearings of appeals shall be conducted before a majority of the Board and will be conducted in the following manner:

1. The petitioner shall be given written notice at the earliest practicable time as to the time and place of such hearing.

2. The Chairman of the Board or his delegated member shall serve as a Hearing Examiner to conduct hearings and a complete record of the hearing shall be made for review by the Board members.

3. All testimony shall be recorded and may or may not be under oath, at the discretion of the Board. The transcript so recorded shall be made available to the petitioner or any party to the hearing upon the payment of the fee for transcribing said testimony.

4. The Board is considering the granting of a variance shall give due consideration to the equities of the petitioner and the others who may be affected by granting or denying the petition.

5. The Board may make the granting of a petition for a variance contingent upon such other requirements or restrictions on the petitioner as the Board may deem appropriate and reasonable.

6. Any variance granted shall be for a period not to exceed one (1) year.

B. If the variance is granted on the grounds that there are no practicable means known or available for the adequate prevention, abatement, or control of the air pollution involved, it shall be only until the necessary means for prevention, abatement, or control become known and available, and subject to the taking of any substitute or alternate measures that the Board may prescribe.

C. If the variance is granted on the grounds that compliance with the particular requirement or requirements from which variance is sought will necessitate the taking of measures which, because of their context or cost, must be spread over a considerable period of time, it shall be for a period not to exceed such reasonable time as, in the view of the Board, is requisite for the taking of the necessary measures. A variance granted on the ground specified herein shall contain a timetable.

D. The Board shall issue and give to the petitioner, in writing, within sixty (60) days following the final argument in such hearing, its final order or determination. Such order or determination shall be approved by at least the majority of members to which the Board is entitled.

E. Upon failure to the Board to issue a final order or determination within sixty (60) days after the final argument in any such hearing the petitioner shall be entitled to treat for all purposes such failure to act as a granting of the variance requested.

F. The burden of proof in such hearings shall be upon the petitioner.

G. Nothing in this section and no variance or renewal thereof granted pursuant hereto shall be construed to prevent or limit the application of the emergency provisions and procedures of these regulations to any person or his property.

H. All final decisions of the Director and the Board shall be on file in the office of the Department and may be inspected by the public during regular office hours.

29.3 Judical Review

Any ruling of the Board shall be subject to review with the Circuit Court of Knox County on a petition for common law writ or certiorari filed within ten (10) days after the Board's decision.

(15.0) 30.0 Violations

30.1 General

A. Violation of any regulation duly adopted by the Board is declared to be a misdemeanor punishable as provided in Tennessee Code Annotated 39 - 105.

B. Violation of any regulation or section of these regulations is considered a separate offense.

C. Each day of violation of any regulation or section of these regulations is considered a separate offense.

D. Every person who is convicted of a misdemeanor shall be punished by imprisonment in the county jail or workhouse not more than one year, or by fine not exceeding one thousand dollars ($1,000) or by both, in the discretion of the Court.

E. Whenever evidence has been obtained or received establishing that a violation of these regulations has been committed, the Director shall have the power and authority to initiate proceedings to prosecute the violator.

F. The Director any cause to be instituted in civil action in any court of competent jurisdiction for injunctive relief to prevent violation of any regulation promulgated by the Board or of any order duly issued by the Director (as confirmed or modified by the Board, if this be the case).

G. Nothing in these regulations shall prevent the Director from making efforts to obtain voluntary compliance with these regulations by issuing a notice to correct or cease the violation. Such notice shall briefly set forth the general nature of the violations and specify a reasonable time within which the violation shall be rectified or stopped. If the violation is not corrected with the time so specified, or the violation stopped, or reasonable steps taken to rectify the violation, the Director shall have the power and authority to issue an order requiring the violator to cease or suspend operation of the facility causing the violation until the violation has been corrected.

H. Where a time for compliance schedule has been established in these regulations, failure to comply with the time schedule and fails to do so in the time allocated by the Director for submitting such proposal and time schedule, such person shall be considered in violation of these regulations.

I. When any person has been requested by the Director to submit to the Director an acceptable proposal and time schedule and fails to do so in the time allocated by the Director for submitting such proposal and time schedule, such person shall be considered in violation of these regulations.

J. Where an acceptable proposal and timetable has been submitted to the Director by any person, failure to comply with the proposal and time schedule shall be considered a violation of these regulations.

30.2 Presumption Clause

Where a violation of these regulations occurs by any person, it shall be presumed that such violation occurred with the knowledge and consent of such person.

(15.0) 31.0 Right of Entry

A. In the performance of their duties, the Director and other employees of the Department are hereby authorized to enter upon and into premises or buildings, to collect and preserve evidence of all facts of violations or possible violations of these regulations, or to perform any duty imposed by these regulations.

B. This section shall not apply to private residences (homes or houses) occupied by two or less dwelling units.

(15.0) 32.0 Use of Evidence

31.1 General

A. Any evidence, finding, fact, or other actions resulting from a violation of these regulations or orders issued pursuant thereto shall insure solely to and shall be for the benefit of the public generally.

B. These regulations are not intended to create in any way or to enlarge or affect in any way any private right.

C. A determination that these has been a violation of these regulations or orders issued pursuant thereto shall not be used in any law suit brought by any private citizen.

(14.0) 33.0 Confidentiality and Accessibility of Records

33.1 General

Any records or other information furnished to the Department concerning one or more air contaminant sources, which records or information, as certified by the owner or operator, relate to production or sales fiqures or the processes or production unique to the owner or operator, shall be only for the confidential use of the Department or the Board in the administration of these regulations, unless such owner or operator shall expressly agree to their publication or availability to the general public or unless the disclosure of such information is required for the prosecution of a violation of these regulations thereunder. Nothing herein shall be construed to prevent the use of such records or information by the Department in compiling or publishing analyses or summaries relating to the general condition of the outdoor atmosphere: provided that such analyses or summaries do not identify any owner or operator or reveal any information otherwise confidential under this section.

33.2 Exemptions

A. The composition of air contaminants and emission data shall not be considered confidential. Such data shall be accessible to the public at the office of the Department during normal working hours.

B. Written records, including, but not limited to the granting of variances and permits, are accessible to the public at the office of the Department of Air Pollution Control and such records are subject to review by the Board.

C. Written records shall be maintained of all actions taken by the Department and such records shall be accessible to the public at the office of the Air Pollution Control Department during normal working hours.

(7.0) 34.0 Malfunction of Equipment

34.1 General

A. In the case of shutdown of air pollution control equipment for necessary or scheduled maintenance, the intent to shutdown such equipment shall, except as provided in Section B of this section, be reported to the Director at least (24) twenty-four hours prior to the planned shutdown. Such prior notice shall include, but is not limited to the following:

1. Identification of the specific facility to be taken out of service as well as its location and permit number.

2. The expected length of time that the air pollution control equipment will be out of service.

3. The nature and quantity of emissions of air contaminants likely to occur during the shutdown period.

4. Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of the shutdown period.

B. Exceptions to shutdown reporting requirements:

1. The report described in Section A of this section shall not be required when, during the shutdown referred to therein, the air contaminants are handled through alternate air pollution control equipment.

2. When shutdowns referred to in Section A of this section are on a routine schedule, the report to the Director may be furnished on an annual basis and shall list the dates and times of the routine schedule shutdown during the following year.

C. When any emission source, air pollution control equipment, or related facility breaks down in such a manner as to cause the emission of air contaminants for an anticipated or actual duration of at least twenty-four (24) hours in violation of these regulations, the person responsible of such equipment shall immediately notify the Director of such failure of breakdown and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The Director shall be notified when the condition causing the failure or breakdown has been corrected and the equipment is again in operation. Where such breakdown might cause the release of air contaminants in such quantity and/or quality and of such duration of time as to create an episode, the regulations as set forth in Section 36.0 shall apply immediately.

(11.0) 35.0 Hazardous Air Contaminants

35.1 General

Hazardous air contaminants are any air contaminants which may cause, or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness, and has been so designated by the Director. Asbestos, beryllium, and mercury are hereby designated hazardous air contaminants. The Director amy from time to time, without public hearing designate additional hazardous air contaminants as designated by the Environmental Protection Agency and published in the Federal Register.

35.2 Information Required Concerning Hazardous Air Contaminants

A. The owner or operator of one or more sources of hazardous air contaminants in existence on the effective date of this regulation shall within (4) four months after official notification by the Director, file with the Director information necessary to allow the evaluation of the air pollution potential of such emissions.

1. As a minimum the following information shall be included for each source which hazardous air contaminants are emitted: identification of hazardous air contaminant; source of hazardous air contaminant; total weight of hazardous air contaminant released per day; period or periods of operation; composition of the hazardous air contaminant; physical state of the hazardous contaminant; temperature and moisture content of the air or gas stream in which the hazardous air contaminant is contained; characterization of the varibility of hazardous air contaminant release respect to rate, composition, and physical characteristics; height, velocity, and direction of air or gas stream at the point where released to the atmosphere and such other information as may be specifically requested by the Director. All such information shall be submitted on forms available from the Director.

2. The owner or operator of a source constructed after the effective date of these regulations shall file with the Director not less than ninety (90) days prior to the estimated starting date of construction, sufficient information to allow evaluation of the air pollution potential of such hazardous air contaminants.

35.3 Operation of Source Emitting Hazardous Air Contaminants

Persons responsible for an air contaminant source emitting designated hazardous air contaminants shall give utmost care and consideration to the potential, harmful effects of emissions resulting from such activities. Evaluation of these facilities as to the adequacy, efficiency, and emission potential will be made on an individual basis by the Director or his designated representative. Such evaluation may require any person responsible for a source of air contaminants to perform such tests as are necessary in the opinion of the Director.

(8.0) 36.0 Emergency Regulations

36.1 Episode Criteria

The pollutant concentrations in the ambient air which would trigger these control actions were selected primarily from expected changes in air quality that would result from accumulation and dispersal processes acting at the same time during a period of continued stagnation. The episode air quality criteria are presented below:

A. Air Pollution Forecast: An internal watch by the Department of Air Pollution Control shall be actuated by a National Weather Service advisory that an Atmospheric Stagnation Advisory is in effect or the equivalent local forecast of stagnant atmospheric condition.

B. Alert: The alert level is that concentration of pollutants at which first stage control actions are to begin. An alert will be delcared when any one of the following levels is reached at any monitoring site:

Sulfur Dioxide (SO_2) - 800 µg/m^3 (0.3 ppm) 24-hour average
Particulate - 3.0 COHs or 375 µg/m^3 - 24-hour average
Sulfur Dioxide and Particulate Combined - product of sulfur dioxide ppm, 24-hour average, and COHs equal to 0.2 or product of sulfur dioxide - µg/m^3, 24-hour average equal to 65 x 10^3.
Carbon Monoxide (CO) - 17 mg/m^3 (15 ppm) - 8-hour average
Oxidant (O_3) - 200 µg/m^3 (0.1 ppm) - 1-hour average
Nitrogen Dioxide (NO_2) - 1,130 µg/m^3 (0.6 ppm) - 1-hour average, 282 µg/m^3 (0.15 ppm) - 24-hour average.

and meteorological conditions are such that the pollutant concentrations can be expected to remain at the above levels for twelve (12) or more hours or increase unless control actions are taken.

C. Warning: The warning level indicates that air quality is continuing to degrade and that additional control actions are necessary. A warning will be declared when any one of the following levels is reached at any monitoring site:

Sulfur Dioxide (SO_2) - 1,600 µg/m^3 (.0.6 ppm) - 24-hour average
Particulate - 5.0 COHs or 625 µg/m^3 - 24-hour average
Sulfur Dioxide and Particulate Combined - product of sulfur dioxide ppm, 24-hour average and COHs equal to 0.8 or product of sulfur dioxide µg/m^3, 24-hour average and particulate µg/m^3, 24-hour average equal to 26 x 10^3.

Carbon Monoxide (CO) - 34 mg/m^3 (30 ppm), 8-hour average
Oxidant (O_3) - 800 µg/m^3 (0.4 ppm), 1-hour average
Nitrogen Dioxide (NO_2) - 2,260 µg/m^3 (1.2 ppm), 1-hour average 565 µg/m^3 (0.3 ppm), 24-hour average

and meterological conditions are such that pollutant concentrations can be expected to remain at the above levels for twelve (12) or more hours or increase unless control actions are taken.

D. Emergency: The emergency level indicates that air quality is continuing to degrade toward a level of significant harm to the health of persons and that the most stringent control actions are necessary. An emergency will be declared when any one of the following levels is reached at any monitoring site:

Sulfur Dioxide (SO_2) - 2,100 µg/m^3 (0.8 ppm), 24-hour average
Particulate - 7.0 COHs or 875 µg/m^3, 24-hour average
Sulfur Dioxide and Particulate Combined - product of sulfur dioxide ppm, 24-hour average and COHs equal to 1.2 or product of SO_2 µg/m^3, 24-hour average and particulate µg/m^3, 24-hour average equal to 393 x 103 x 10^3
Carbon Monoxide (CO) - 46 mg/m^3 (40 ppm), 8-hour average
Oxidant (O_3) - 1,200 µg/m^3 (0.6 ppm), 1-hour average
Nitrogen Dioxide (NO_2) - 3,000 µg/m^3 (1.6 ppm), 1-hour average; 750 µg/m^3 (0.4 ppm), 24-hour average

and meterological conditions are such that this condition can be expected to continue for twelve (12) or more hours.

E. Termination: Once declared, any status reached by application of these criteria will remain in effect until the criteria for that level are no longer met. At such time, the next lower status will be assumed.

36.2 Emission Reduction Plans - Alert Level

36.3 General

A. There shall be no open burning by any person.

B. The use of incinerators shall not be permitted.

C. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12:00 noon and 4:00 p.m.

D. Persons operating motor vehicles should eliminate all unnecessary operation.

36.4 Source Curtailment

Any person responsible for the operation of a source of air pollutants listed below shall take all required control actions for this alert level.

A. Source of Air Pollution

Coal or oil-fired electric power generating facilities.

Control Action

1. Substantial reduction by utilization of fuels having low ash and sulfur content.
2. Maximum utilization of mid-day (12:oo noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
3. Substantial reduction by diverting electric power generation to facilities outside of alert area.

B. Source of Air Pollution

Control Action

1. Substantial reduction by utilization of fuels having low ash and sulfur content.
2. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
3. Substantial reduction of steam load demands consistent with continuing plant operations.

C. Source of Air Pollution

Manufacturing industries of the following classifications:

Primary Metals Industry
Chemical Industries
Paper and Allied Products
Petroleum Refining Operations
Mineral Processing Industries
Grain Industry

Control Action

1. Substantial reduction of air contaminants from manufacturing operations by curtailing, postponing, or deferring production and all operations.

2. Maximum reduction by deferring trade waste disposal operations which emit solid particles, gases, vapors, or malodorous substance.

3. Maximum reduction of heat load demands for processing.

4. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.

36.5 Emission Reduction Plans - Warning Level

36.6 General

A. There shall be no open burning by any person.

B. The use of incinerators shall not be permitted.

C. Persons operating fuel-burning equipment which requires boiler lancing or soot blowing shall perform such operations only between the hours of 12:00 noon and 4:00 p.m.

D. Persons operating motor vehicles must reduce operations by the use of car pools and increase use of public transportation and the elimination of unnecessary operation.

36.7 Source Curtailment

Any person responsible for the operation of a source of air pollutants listed below shall take all required control actions for this warning level.

A. Source of Air Pollution

Coal or oil-fired power generating facilities

Control Action

1. Maximum reduction of utilization of fuels having lowest ash and sulfur content.

2. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.

3. Maximum reduction by diverting electric power to facilities outside of warning area.

B. Source of Air Pollution

Coal and oil-fired process steam generating facilities.

Control Action

1. Maximum reduction by utilization of fuels having the lowest available ash and sulfur content.

2. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.

3. Making ready for use a plan of action to be taken if an emergency develops.

C. Source of Air Pollution

Manufacturing industries which require considerable lead time for shutdown including the following classifications:

Petroleum Refining
Chemical Industries
Primary Metals Industries
Glass Industries
Paper and Allied Products

Control Action

1. Maximum reduction of air contaminants from manufacturing operations by, if necessary, assuming reasonable economic hardship by postponing production and allied operation.

2. Maximum reduction by deferring trade waste disposal operations which emit solid particles, gases, vapors, or malodorous substances.

3. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

D. Source of Air Pollution

Manufacturing industries which require relatively short lead times for shutdown including the following classifications:

Primary Metals Industries
Chemical Industries
Mineral Processing Industries
Grain Industry

Control Action

1. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing, or

deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.

2. Elimination of air contaminants from trade waste disposal processes which emit solid particles, gases, vapors, or malodorous substances.

3. Maximum reduction of heat load demands for processing.

4. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

36.8 Emission Reduction Plans - Emergency Level

36.9 General

A. There shall be no open burning by any persons.

B. The use of incinerators shall not be permitted.

C. All places of employment described below shall immediately cease operation:

1. Mining and quarrying of non-metallic minerals.

2. All construction work except that which must proceed to avoid eminent physical harm.

3. All manufacturing establishments except those required to have in force an air pollution emergency plan.

4. Wholesale trade establishments; i.e., places of business primarily engaged in selling merchandise to retailers, to industrial, commercial, institutional, or professional users, or to other wholesalers, or acting as agents in buying merchandise for or selling merchandise to such persons or companies except those engaged in the distribution of drugs, surgical supplies, and food.

5. All offices of local, county, and State government including authorities, joint meetings, and other public bodies excepting some agencies which are determined by the chief administrative officer of local, county, or State government, authorities, joint meetings, and other public bodies to be vital for public safety and welfare and the enforcement of the provisions of this order.

6. All retail trade establishments except pharmacies, surgical supply distributors, and stores primarily engaged in the sale of food.

7. Banks, credit agencies other than banks, securities and commodities brokers, dealers, exchanges and services; offices of insurance carriers, agents and brokers, and real estate offices.

8. Wholesale and retail laundries, laundry services and cleaning and dyeing establishments; photographic studios; beauty shops, barber shops, and shoe repair shops.

9. Advertising offices; consumer credit reporting, adjustment and collection agencies; duplicating, addressing, blue-printing; photocopying, mailing, mailing lists and stenographic services; equipment rental services, commercial testing laboratories.

10. Automobile repair, automobile services, garages.

11. Establishmens rendering amusement and recreation services including motion picture theaters.

12. Elementary and secondary schools, colleges, universities, professional schools, junior colleges, vocational schools, and public and private libraries.

D. All commercial and manufacturing establishmens not included in this order will institute such actions as will result in maximum reduction of air pollutants from their operations by ceasing, curtailing, or postponing operations which emit air pollutants to the extent possible without causing injury to persons or damage to equipment.

E, The use of motor vehicles is prohibited except in emergencies with the approval of local and/or State police.

36.10 Source Curtailment

Any person responsible for the operation of a source of air pollutants listed below shall take all required control actions for this emergency level.

A. Source of Pollution

Coal and oil-fired electric power generating facilities.

Control Action

1. Maximum reduction by utilization of fuels having lowest ash and sulfur content.
2. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
3. Maximum reduction by diverting electric power generation to facilities outside the emergency area.

B. Source of Air Pollution

Coal and oil-fired process steam generating facilities.

Control Action

1. Maximum reduction by reducing heat and steam demands to absolute necessities consistent with preventing equipment damage.
2. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing and soot blowing.
3. Taking the action called for in the emergency plan.

C. Source of Air Pollution

Manufacturing industries of the following classifications:

Primary Metals Industries
Chemical Industries
Grain Industry
Petroleum Refining
Mineral Processing Industries
Paper and Allied Products

Control Action

1. Elimination of air contaminants from manufacturing operations by ceasing, curtailing, postponing, or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
2. Elimination of air contaminants from trade waste disposal processes which emit solid particles, gases, vapors, or malodorous substances.
3. Maximum reduction of heat load demands for processing.

4. Maximum utilization of mid-day (12:00 noon to 4:00 p.m.) atmospheric turbulence for boiler lancing or soot blowing.

(50.0) 37.0 Separation of Emissions

37.1 General

If air contaminants from a single source operation are emitted through two or more emission points, the total emitted quantity of any air contaminant limited in these regulations cannot exceed the quantity which would be the allowable emission through a single emission point; and the total emitted quantity of such air contaminant shall be taken as the product of the emission points and the exhaust gas volume through all emission points, unless the person responsible for the source operation establishes the correct total emitted quantity.

(50.0) 38.0 Combination of Emissions

38.1 General

A. If air contaminants from two or more source operations are combined prior to emission and there are adequate and reliable means reasonably susceptible to confirmation and use by the Director for establishing a separation of the components of the combined emission to indicate the nature, extent, quantity, and degree of emission arising from each such source operation, these regulations apply to each such operation separately.

B. If air contaminants from two or more source operations are combined prior to emission and the combined emission cannot be separated according to the requirements of paragraph 38.1 A, these regulations shall be applied to the combined emission as if it originated in a single source operation subject to the most stringent limitations and requirements placed by these regulations on any of the source operations whose contaminants are so combined.

(2.0) 39.0 Severability

39.1 General

The provisions of these Regulations are severable and if any part, section, subsection, clause, paragraph or pharse of these Regulations shall be adjudged to be invalid or unconstitutional by any court of competent jurisdication, the judgement shall not affect, impair or invalidate the remainder of these Regulations, but shall be confined in its operation to the part, section, subsection, clause, paragraph or phrase of these Regulations that shall be directly involved in the controversy in which such judgment shall have been rendered.

AIR POLLUTION CONTROL

CHAPTER 3

MEMPHIS CITY CODE

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CHAPTER 3

AIR POLLUTION CONTROL

(2.0) Article I. In General

(1.0) Section 3-1 Definitions

For the purposes of this chapter, the following words and phrases shall have the meanings respectively ascribed to them by this section:

Air cleaning device shall mean any method, process or equipment which removes, reduces or renders less noxious, air contaminants discharged into the atmosphere.

Air contaminant shall mean dust, fumes, mist smoke, other particulate matter, vapor, gas, odorous substances, or any combination thereof.

Air contaminant source is any and all sources of emission of air contaminants, whether privately or publicly owned or operated. Without limiting the generality of the foregoing, this term includes all types of business, commercial and industrial plants, works, shops and stores, and heating and power plants and stations, buildings and other structures of all types, including multiple family residences, apartment houses, office buildings, hotels, restaurants, schools, hospitals, churches and other institutional buildings; automobiles, trucks, tractors, buses and other motor vehicles; garages; vending and service locations and stations; railroad locomotives; ships, boats and other waterborne craft; portable fuel burning equipment; incinerators of all types, indoor and outdoor; and refuse dumps.

Air pollution is the presence in the outdoor atmosphere of one or more air contaminants in such quantities, characteristics, or duration as is or tends to be injurious to human health or welfare, or animal or plant life or health, or property, or would interfere with the enjoyment of life or property or the conduct of business.

Board shall mean the air pollution control hearing board.

Emission means the act of releasing or discharging air pollutants into the ambient air from any source.

Ferrous jobbing cupola shall mean a vertical cylindrical furnace with tuyeres and tapping spouts near the bottom used for melting iron in a foundry operating not more than four hours in a day with a process weight rate not in excess of 20,000 pounds per hour.

Fuel burning installation shall mean any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.

Fugitive dust shall mean solid, airborne particulate matter emitted from any source other than through a stack.

Health Department is the Memphis and Shelby County Health Department.

Health Officer shall mean the Director of the Memphis and Shelby County Health Department, or his designated representative.

Incinerator is any equipment, device, or contrivance used for disposal of waste or refuse by burning.

Opacity shall mean a state which renders material partially or wholly inpervious to rays of light and causes obstruction of an observer's view. The percentage opacity of a plume is numerically equal to twenty (20) times the Ringelmann number for a plume of black smoke having equivalent capacity of obscuration.

Open burning is unconfined burning of combustible material where no equipment has been provided and used for control of air for combustion.

Particulate matter shall mean any material, except water in uncombined form, that is or has been airborne and exists as a liquid or a solid at standard conditions.

Person shall mean any individual, public or private corporation, political subdivision, agency, board, department or bureau of the state, municipality, partnership, association, firm, trust, estate, or any other legal entity whatsoever which is recognized by law as the subject of right and duties.

Process weight means the total weight of all materials introduced into any specific process that may cause any emission of particulate matter. Solid fuels charged are considered as part of the process weight, but liquid and gaseous fuels and combustion air are not. For a cyclical or batch operation, the process weight per hour is derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle. For a continuous operation, the process weight per hour is derived by dividing the process weight for a typical period of time.

Ringelmann chart means the chart published and described in the U.S. Bureau of Mines Information Circular 8333.

Source means any property, real or personal, which emits or may emit any air pollutant.

Stack shall mean any chimney, flue, conduit, or duct arranged to conduct emissions to the ambient air.

Standard conditions shall mean a dry gas temperature of 70^{0} Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

(15.0) Section 3-2 Violations of Chapter-Notice; Citation; Injunctive Relief

(a) Whenever evidence has been obtained or received establishing that a violation of this code has been committed, the health officer shall issue a notice to correct the violation or a citation to cease the violation. Such notice or citation shall briefly set forth the general nature of the violation and specify a reasonable time within which the violation shall be rectified or stopped. If the violation is not corrected within the time so specified, or the violation stopped, or reasonable steps taken to rectify the violation, the health officer shall have the power and authority to issue an order requiring the violator to cease or suspend operation of the facility causing the violation until the violation has been corrected, or initiate proceedings to prosecute the violator for violation of this code.

(b) In the event any person fails to comply with a cease or suspend operation order, that is not subject to a stay pending administrative or judicial review, the health officer shall institute proceedings in a court of competent jurisdiction for injunctive relief to enforce the regulations or orders pursuant hereto.

(15.0) Section 3-3 Penalty

Violation of any provision of this Chapter is declared to be a misdemeanor and each day of violation shall constitute a separate offense. Conviction of a misdemeanor is punishable by imprisonment of not more than thirty (30) days or fifty dollars ($50.00) fine or both.

Legal authority: Tennessee Code Annotated 53-3423.

(8.0) Section 3-4 Emergencies

(a) Any other provisions of the law notwithstanding, if the health officer finds that a generalized condition of air pollution exists and that it creates an emergency requiring immediate action to protect human health or safety, the health officer shall order persons causing or contributing to the air pollution to reduce or discontinue immediately the emission of air contaminants. Upon issuance of any such order, the health officer shall fix a place and time, not later than twenty-four (24) hours thereafter, for a hearing to be held before the Air Pollution Control Hearing Board. Such hearing shall be held in comformity with the provisions of Section 3-35, insofar as applicable. Not more than twenty-four (24) hours after the commencement of such hearing, and without adjournment thereof, the Air Pollution Control Hearing Board shall affirm, modify or set aside the order of the health officer.

(b) In the absence of a generalized condition of air pollution of the type referred to in subsection (a) of this section, but if the health officer finds that emissions from the operation of one or more air contaminant sources is causing imminent danger to human health or safety, he may order the person responsible for the operation in question to reduce or discontinue operations immediately, without regard to the provisions of this Chapter. In such event, the requirements for hearing and affirmance, modification or setting aside of orders set forth in subsection (a) of this section shall apply.

(10.0) Section 3-5 New Sources and Modification of Existing Sources of Air Contamination - Approval Required

(a) No person shall construct a new air contaminant source or make modifications to an existing air contaminant source or install an air cleaning device without first having submitted a report and/or plans and specifications to the health officer for approval prior to the initiation of construction.

(b) The application for construction approval shall be made on forms available from the health officer not less than ninety (90) days prior to the estimated starting date of construction.

(c) In the event the requirement for approval prior to construction will create an undue hardship to the applicant, the applicant may request of the health officer a waiver to proceed with construction. The application for a waiver shall explain the circumstances which will cause such undue hardship.

(d) If a waiver is granted the applicant shall submit a report and/or plans and specifications for approval as soon as is reasonably practical. The applicant, after a waiver is granted, proceeds with construction at his own risk; and if after construction, modification, relocation or installation has begun or been completed, the report and/or plans and specifications and completed installations do not meet the health officer's approval, the alterations required to effect such approval shall be made within a reasonable time, as specified by the health officer.

(e) The health officer will acknowledge receipt of the report and/or plans and specifications within one week of the receipt and will estimate the time necessary for processing. The health officer will notify, the applicant in writing of his approval, or denial.

(f) Reports and or plans and specifications will be approved, and a construction permit issued, only when it appears that they are in accordance with engineering guides acceptable to the health officer and provided that the emissions from the proposed air contaminant source will not prevent the attainment and maintenance of the ambient air quality standards as set forth in Section 3-15 of this Chapter.

(g) In the event of the denial of an application, the applicant will be notified in writing of the reasons thereof. All denials shall be without prejudice to the applicant's request for a hearing before the health officer or for filing a further application after revisions are made to meet the objections specified as the reason for the denial.

(h) Construction approvals issued under this section are based on the control of air contaminants only and do not in any way affect the applicant's obligation to obtain necessary permits from other governmental agencies.

(3.0) Section 3-6 Operating Permits

(a) Any person operating a facility constructed or modified in accordance with Section 3-5 of this Chapter shall receive an Operating Permit from the health officer within thirty (30) days after said facility is placed in operation.

(b) Any person operating an air contaminant source constructed on or before the effective date of this regulation shall file an application for an Operating Permit with the health officer on or before January 1, 1973.

(c) Application of an Operating Permit shall be made on forms available from the health officer and shall include as a minimum the following information for each source: total weight of contaminants released each day; period or periods of operation; composition of the contaminant; physical state of the contaminant; temperature and moisture content of the air or gas stream in which the contaminant is contained; characterization of the variability of the contaminant with respect to rate, composition, and physical characteristics; height, velocity, and direction of the air or gas stream at the point where released to the atmosphere, and such other information as specifically required by the health officer. Where an air or gas cleaning device is incorporated in the air or gas stream preceding discharge to the atmosphere, the weight of the material removed by the cleaning device as well as the weight of the material emitted shall be stated.

(d) The Operating Permit shall only be issued on evidence satisfactory to the health officer that the operation of said facility is in compliance with the regulations of this Chapter or directives of the health officer. Such evidence may include a requirement that the applicant conduct such tests as are necessary in the opinion of the health officer to determine the kind and amounts of contaminants emitted from the equipment or air cleaning device.

(e) Operating Permits shall be valid for a period of one (1) year or for such longer period of time as the health officer may designate. A permit issued for a period of less than one (1) year shall be designated as a Temporary Permit. The application for renewal of an Operating Permit shall be filed with the health officer not less than thirty (30) days prior to the expiration of an existing Operating Permit.

(f) Operation of each facility shall be in accordance with the provisions and stipulations set forth in the Operating Permit.

(g) An Operating Permit is not transferable from one person to another person nor from one facility to another facility without prior approval from the health officer.

(h) The health officer may suspend or revoke either a Construction or an Operating Permit if the permit holder fails to comply with the provisions, stipulations, or compliance schedules provided in the permit. Suspension or revocation of a Construction or an Operating Permit shall become final ten (10) days after service of notice, exclusive of the day of service, on the holder thereof.

(i) No person shall willfully cause or permit the installation or use of any device or use of any means which, without resulting in a reduction in the total amount of air contaminants emitted, conceals or appears to minimize the emission of air contaminants which would otherwise violate these regulations. Air introduced for dilution purposes only is considered a circumvention of these regulations.

(j) No person shall be required to obtain or file a request for an Operating Permit due to ownership or operation of the following air contaminant sources unless specifically required to do so by the health officer:

(1) Mobile sources such as: automobiles, trucks, buses, locomotives, planes and boats.
(2) Fuel burning equipment of less than 500,000 BTU per hour capacity.
(3) Sources discharging less than 0.5 pounds per hour of non hazardous particulates from a single stack or less than 0.5 pounds per hour of non hazardous particulates from two or more stacks, whichever is more restrictive.
(4) Equipment used on farms for soil preparation, tending, or harvesting of crops or for preparation of feed to be used on the farm where prepared.
(5) Operations exempted under Section 3-16 (Open Burning) of these regulations.

(9.0) Section 3-7 Sampling and Testing to Establish Air Contaminant Levels

(a) The health officer may at his discretion require the applicant for an Operating Permit to conduct or have conducted such tests as are necessary to determine the amounts of air contaminants emitted from any equipment or air cleaning device constructed or installed after the effective date of these regulations. Such tests shall be made at the expense of the applicant and shall be conducted by the most current method described in the Federal Register or by an equivalent method approved by the health officer.

(b) The health officer may conduct or cause to be conducted any test or tests of any equipment or air cleaning device constructed or installed on or before the effective date of these regulations if in his opinion the operations of such equipment or air cleaning device will result in emissions in excess of the limitations prescribed in this Chapter. Such tests shall be conducted by the most current method described in the Federal Register or by an equivalent method approved by the health officer. If such tests are conducted by the owner of the equipment or air cleaning device, or by his agent, such tests shall be made at the expense of the owner, and the health officer may require that such tests be conducted in the presence of his representative.

(c) The person responsible for the equipment or air cleaning device to be tested shall provide, at his expense, reasonable and necessary openings in the system or stack and safe and easy access thereto, to permit technically valid samples and measurements to be taken.

(d) The health officer may require the owner or operator of an air contaminant source, as a condition of his Operating Permit, to conduct or have conducted periodic tests to establish the amount of air contaminants emitted. The nature, extent and frequency of such required testing shall be specified in the Operating Permit. Such tests shall be made at the expense of the owner or operator and shall be conducted by the most current method described in the Federal Register or by an equivalent method approved by the health officer. The health officer shall be supplied with such data as stipulated in the Operating Permit.

(9.0) Section 3-8 Monitoring of Source Emissions, Records, Reporting

(a) The health officer may require the owner or operator of any air contaminant source to install, use, and maintain such monitoring equipment as the health officer may prescribe; sample such emissions in accordance with methods as the health officer shall prescribe; and establish and maintain such periodic emission reports as required by the health officer.

(b) Each owner or operator of any air contaminant source directed by the health officer to monitor and report on specified air contaminants shall develop and submit a detailed monitoring program; and order and install sampling equipment within the following time schedule:

(1) Within sixty (60) days after designation by the health officer of those air contaminants to be monitored, the owner or operator of the air contaminant source shall submit a detailed monitoring program for approval by the health officer.

(2) Within thirty (30) days after the monitoring program has been approved in writing by the hearing officer, sampling and monitoring equipment shall be ordered.

(3) Within ninety (90) days after delivery of the equipment the owner or operator of the air contaminant source shall place said equipment in effective operation in accordance with its approved monitoring program.

(c) Records and reports as the health officer shall require on air contaminants or fuel shall be recorded, compiled, and submitted in a format as presribed by the health officer.

(d) Any records, reports, or information obtained under this Section shall be available to the public, except that upon a showing satisfactory to the health officer by any person that records, reports, or information, or particular part thereof, (other than emission data) to which the health officer has access if made public would divulge production or sales figures or methods, processes or production unique to such person, or would otherwise tend to affect adversly the competitive position of such person by revealing trade secrets, the health officer shall consider such record, report, or information or particular portion thereof confidential in the administration of this Chapter. Nothing herein shall be construed to prevent disclosure of such report, record, or information to Federal, State, or local air pollution control laws, or when relevant in any proceeding under this Chapter.

(7.0) Section 3-9 Malfunction of Equipment, Reports Required
(13.0)

(a) In the case of shutdown of air pollution control equipment for necessary scheduled maintenance, the intent to shutdown such equipment shall be reported to the health officer at least twenty-four (24) hours prior to the planned shutdown. Such prior notice shall include, but is not limited to the following:

(1) Identification of the specific facility to be taken out of service as well as its location and permit number.

(2) The expected length of time that the air pollution control equipment will be out of service.

(3) The nature and quantity of emissions of air contaminants likely to occur during the shutdown period.

(4) Measures such as the use of off-shift labor and equipment that will be taken to minimize the length of shutdown period.

(5) The reasons that it would be impossible or impractical to shutdown the source operation during the maintenance period.

(b) When any emission source, air pollution control equipment, or related facility breaks down in such a manner as to cause the emission of air contaminants for an anticipated or actual duration of at least twenty-four (24) hours in violation of these regulations, the person responsible for such equipment shall immediately notify the health officer of such failure or breakdown and provide a statement giving all pertinent facts, including the estimated duration of the breakdown. The health officer shall be notified when the condition causing the failure or breakdown has been corrected and the equipment is again in operation.

(5.0) Section 3-10 Variances

(a) Any person who owns or is in control of any plant, building, structure, establishment, process or equipment including a group of persons who owns or controls like processes or like equipment may apply to the Air Pollution Control Hearing Board, hereinafter referred to as "the Board", for a variance from rules or regulations governing the quality, nature, duration or extent of discharge of air contaminants. The application shall be accompanied by such information and data as the Board may require. The hearing held hereunder shall be conducted in accordance with the rules of evidence as set forth in Section 3-35 of this Chapter as now or hereafter amended. The Board may grant such variance, but only after public hearing on due notice, if it finds that:

(1) The emissions occurring, or proposed to occur do not endanger or tend to endanger human health, safety, or welfare, or do not cause or tend to cause property damage.

(2) Compliance with the rules or regulations from which variance is sought would produce serious hardship without equal or greater benefits to the public.

(b) No variance shall be granted or denied pursuant to this section until the Board has considered the relative interests of the applicant, other owners of property likely to be affected by the discharges and the general public.

(c) Any variance or renewal thereof shall be granted within the requirements of subsection (a) for time periods and under conditions consistent with the reasons therefor, and with the following limitations:

(1) If the variance is granted on the grounds that there is no practicable means known or available for the adequate prevention, abatement, or control of the air pollution involved, the variance shall be permitted only until the necessary means for prevention, abatement, or control become known and available, and the variance shall be subject to the taking of any sutstitute or alternate measures that the Board may prescribe.

(2) If the variance is granted on the ground that compliance with the particular requirement or requirements from which variance is sought will necessitate the taking of measures which, because of their extent or cost, must be spread over a considerable period of time, it shall be for a period not to exceed such reasonable time as, in view of the Board, is requisite for the taking of necessary measures. A variance granted on the ground specified herein shall contain a timetable for the taking of action in an expeditious manner and shall be conditioned on adherence to such timetable.

(3) Any variance or renewal granted shall be for a time period not to exceed one (1) year.

(d) Any variance granted pursuant to this section may be renewed on terms and conditions and for periods which would be appropriate on initial granting of the variance. If complaint is made to the Board on account of the variance, no renewal thereof shall be granted, unless, following public hearing on the complaint, the Board finds that renewal is justified. No renewal shall be granted except on application therefor. Any such application shall be made at least sixty (60) days prior to the expiration of the variance. Immediately upon a receipt of an application for renewal, the Board shall give public notice of such application in accordance with rules and regulations of the Board.

(e) A variance or renewal shall not be a right of the applicant or holder thereof, but shall be in the discretion of the Board. However, any applicant adversely affected by the denial or the terms and conditions of the granting of an application of a variance or renewal of a variance by the Board may obtain judicial review thereof in a court of competent jurisdiction.

(f) Nothing in this section and no variance or renewal granted pursuant hereto shall be construed to prevent or limit the application of the emergency provisions and procedures of Section 3-4 of this Chapter to any person or his property.

Sections 3-11, 3-12, 3-13, 3-14. Reserved.

(2.0) Article II. Regulations

(4.0) Section 3-15 Ambient Air Quality Standards

These ambient air quality standards, as shown in Table 1 shall not be construed, applied or interpreted to allow any deterioration of the existing air quality.

(51.13) Section 3-16 Open Burning

(a) No person shall cause, suffer, allow or permit open burning of refuse, garbage, trade waste, trees, limbs, brush, or materials from salvage operations.

(b) Open burning as listed below may be conducted without permit subject to fire department approval and provided further that no public nuisance is or will be created by the open burning.

(1) Fires used for the cooking of food or for ceremonial or recreational purposes including barbecues and outdoor fireplaces.

(2) Fires set for the training and instruction of firemen or for research in fire protection or prevention.

(3) Smokeless flares or safety flares for the combustion of waste gases provided other applicable sections of this chapter are met.

(c) Exceptions to subsection (a) may be permitted if all of the following conditions are met:

(1) A request is filed with the health officer giving the reason why no method except open burning can be employed to dispose of the material involved, the amount and kind of material to be burned, the exact location where the burning will take place, and the dates when the open burning will be done.

(2) Approval is received from the health officer.

(3) Permission is secured from the fire department in the jurisdiction involved.

(4) The burning will be done between the hours of 9:00 a.m. and 4:00 p.m. or as authorized by the health officer.

(d) This grant of exemption will not relieve the person responsible for such burning from the consequences of any damages, injuries, or claims resulting from such burning.

(50.1.2)Section 3-17 Regulation of Visible Emissions

(a) As used in this section, existing air contaminant source refers to such sources as were in operation or under construction on May 27, 1969, and new air contaminant sources refers to such sources as began construction after the effective date of these regulations.

(b) No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any new air contaminant source, visible emissions with a density greater than No. 1 on the Ringelmann Chart or an opacity in excess of twenty (20) percent.

(c) No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any existing air contaminant source, excepting incinerators, with a density greater than No. 2 on the Ringelmann Chart or an opacity in excess of forty (40) percent.

(d) On or after July 1, 1975, the provisions of subsection (c) shall no longer be applicable and all air contaminant sources shall be considered as new sources for the purpose of this section.

(e) No person shall cause, suffer, allow or permit to be discharged into the atmosphere from any incinerator, visible emissions with a density greater than No. 1 on the Ringelmann Chart or an opacity in excess of twenty (20) percent.

(f) Subsections (b) and (c) of this section shall not apply to smoke emitted during the cleaning of a fire, the building of a new fire or the blowing of soot from boiler surfaces, the shade or appearance of which is not darker than that designated as No. 3 on the Ringelmann Chart for a period or periods aggregating no more than three (3) minutes in any thirty (30) consecutive minutes.

(g) This section shall not apply when the presence of uncombined water is the only reason for the failure of the emission to meet the requirements of this section.

(h) This section shall not apply to visible emissions from fuel burning equipment used exclusively to provide space heating in a building containing not more than two (2) dwelling units.

(50.1) Section 3-18 Fugitive Dust

No person shall cause, suffer, allow or permit any materials to be handled, transported, or stored; or a building, its appurtenances, or a road to be used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, but not be limited to, the following:

(1) Use, where possible, water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

(2) Application of asphalt, oil, water, or suitable chemicals on material stockpiles, and other surfaces which can create airborne dusts;

(3) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods shall be employed during sandblasting or other similar operations;

(4) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;

(5) Conduct of agricultural practices such as tilling of land, application of fertilizers, etc. in such manner as to not create a nuisance to others residing in the area.

(6) The paving of roadways and their maintenance in a clean condition.

(7) The prompt removal of earth or other material from paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.

(50.7) Section 3-19 Nuisance Abatement

When dust, fumes, gases, mist odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any regulation, the health officer may order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas-borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air.

(50.1.1)Section 3-20 Regulation of Process Particulate Emissions

(a) As used in this section, existing air contaminant sources refers to such sources as were in operation or under construction on the effective date of these regulations and new air contaminant sources refers to such sources as began construction after the effective date of these regulations.

(b) On or after July 1, 1972, no person shall cause, suffer, allow or permit the emission of particulate matter in any one hour from any existing air contaminant source in excess of the amount shown in Table 2 (section 3-27) for the process weight rate allocated to such source.

(c) No person shall cause, suffer, allow or permit the emission of particulate matter in any one hour from any new air contaminant source in excess of the amount shown in Table 3 (section 3-27) for the process weight rate allocated to such source.

(d) Irrespective of the maximum allowable emission as determined by the Process Weight Table 2 or Table 3 (section 3-27), the concentration of particulate process emission shall not be required to be less than 0.02 grains per standard cubic foot of stack gases unless a lesser concentration is found by the health officer to be necessary.

(e) Irrespective of the maximum allowable emission as determined by the Process Weight Table 2 and Table 3 (section 3-27), the maximum allowable concentration of particulate process emission shall be 0.25 grains per standard cubic foot of stack gases.

(f) When one or more sources are emitting particulates at rates in conformity with applicable maximum allowable emission rates and the ambient air quality standard for particulate matter is being exceeded, the health officer shall be responsible for setting an appropriate emission standard for each source contributing to the particulate matter in the ambient air, at such value as the health officer may consider necessary to achieve the desired air quality.

(51.4) Section 3-21 Regulation of Particulate Matter from Ferrous Jobbing Cupolas

On or after July 1, 1973, no person shall cause, suffer, allow or permit the emission of particulate matter in any one hour from any existing ferrous jobbing cupola in excess of the amount shown in Table 4 (section 3-27), for the process weight rate allocated to such source. Existing cupola refers to any cupola in operation or under construction on the effective date of these regulations.

(51.5) Section 3-22 Regulation of Particulate Matter from Fuel Burning Installations

No person shall cause, suffer, allow or permit particulate emissions in excess of the limitation set forth in this section.

(a) For fuel burning installations constructed on or before the effective date of these regulations having a total plant heat input up to and including 4,000 million BTU per hour, the maximum allowable particulate emission shall be determined from Fiqure 1, existing curve (section 3-27) and shall be achieved by July 1, 1973.

(b) For fuel burning installations constructed on or before the effective date of these regulations having a total plant heat input in excess of 4,000 million BTU per hour, the maximum allowable particulate emission shall be determined from Figure 1, existing curve (section 3-27), and shall be achieved by July 1, 1974.

(c) For fuel burning installations constructed after the effective date of these regulations, the maximum allowable particulate emission shall be determined by Figure 1, new curve (section 3-27), based on the total plant heat input to one or more stacks. This allowable emission standard must be attained at the time such fuel burning installation begins operation.

(51.9) Section 3-23 Regulations of Particulate Matter from Incinerators

(a) No person shall cause, suffer, allow or permit the emissions of any incinerator having a charging rate of 2,000 pounds per hour or less, fly ash or other particulate matter in quantities exceeding 0.2 grains per cubic foot of flue gas at standard conditions corrected to 12 percent carbon dioxide by volume excluding the contribution of auxiliary fuel.

(b) No person shall cause, suffer, allow or permit the emissions from any incinerator having a charging rate greater than 2,000 pounds per hour, fly ash or other particulate matter in quantities exceeding 0.1 grains per standard cubic foot of flue gas at standard conditions corrected to 12 percent carbon dioxide by volume excluding the contribution of auxiliary fuel.

(c) No person shall cause, suffer, allow, or permit the emissions of particles of unburned waste or ash from any incinerator which are individually large enough to be visible while suspended in the atmosphere.

(d) No person shall construct, install, use or cause to be used any incinerator which will result in odors being detectable by sense of smell in any area of human use or occupancy.

(e) No person shall install or construct an incinerator to be used for disposal of combustible waste from dwelling units if such incinerator is to be used to burn such wastes produced by fewer than twenty-five (25) dwelling units.

(f) No person shall use or cause to be used any incinerator unless all components connected to or attached to, or serving the incinerator, including control apparatus, are functioning properly and are in use. Incinerators shall be operated so as to comply with recognized good practices.

(g) Incinerators having 2.5 cubic feet furnace volume or less used solely for the disposal of infective dressings and other similar material shall not be required to meet these emission standards.

(51.6) Section 3-24 Sulfur Dioxide

(a) No person shall cause, suffer, allow or permit the emissions from any fuel burning installation constructed after the effective date of these regulations, gases containing more than 620 parts per million by volume (dry basis), corrected to 15 percent excess air, of sulfur oxides calculated as sulfur dioxide.

(b) After July 1, 1973, no person shall cause, suffer, allow or permit the emissions from any fuel burning installation in operation on or under construction prior to the effective date of these regulations, gases containing more than 2000 parts per million by volume (dry basis), corrected to 50 percent excess air, of sulfur oxides calculated as sulfur dioxide. All existing fuel burning installations must upgrade to comply with the new emission limit of 620 parts per million by volume (dry basis), corrected to 15 percent excess air, of sulfur oxides calculated as sulfur dioxide by July 1, 1975.

(c) No person shall cause, suffer, allow or permit the emissions from any air contaminant source, excluding fuel burning installations, constructed after the effective date of these regulations, in excess of 500 parts per million by volume (dry basis) of sulfur oxides calculated as sulfur dioxide.

(d) After July 1, 1973, no person shall cause, suffer, allow or permit the emissions from any air contaminant source, excluding fuel burning installations, in operation or under construction prior to the effective date of these regulations, gases containing more than 2000 parts per million by volume (dry basis) of sulfur oxides calculated as sulfur dioxide. All existing air contaminant sources must upgrade to comply with the new source emission limit of 500 parts per million by volume (dry basis) of sulfur oxides calculated as sulfur dioxide by July 1, 1975.

(e) Emission of sulfur oxides from sources constructed on or before the effective date of these regulations and exceeding the limit for such source as given in subsection (b) or (d) of this section, shall not be in violation of this section provided terms (1) or (2) along with terms (3) and (4) of this subsection are met.

(1) The owner or operator of a source emitting sulfur oxides shall demonstrate by ambient air monitoring that the source does not contribute to ground level concentrations of sulfur oxides in excess of eighty (80) percent of the secondary ambient air quality standard of section 3-15 of these regulations. Such ground level concentrations shall be determined by at least three (3) continuous recording sulfur dioxide monitoring stations and at least one recording meteorological station equipped to record wind speed and direction in the area surrounding the source. The air monitoring network must be approved by the health officer.

(2) The owner or operator shall demonstrate by calculation that the source does not cause or contribute to ground level concentrations of sulfur oxides in excess of eighty (80) percent of the secondary ambient air quality standard of section 3-15 of these regulations. Such ground level concentrations shall be determined by calculation utilizing a method(s) approved by the health officer. A sufficient number of ambient air monitors will be required to validate the calculated data.

(3) The owner or operator of an air contaminant source shall submit to the health officer a monthly summary of ground level concentrations as monitored or calculated in a format prescribed by the health officer. In addition, the air monitoring instruments shall be available for observation and testing by the health officer upon request.

(4) By October 1, 1972, the owner or operator of an air contaminant source in operation on the effective date of these regulations shall indicate in writing to the health officer, that the owner or operator wishes to utilize the option provided in this subsection in lieu of meeting the emission standards. Should an owner or operator fail to indicate his intention by the prescribed date, the emission standards shall apply.

(5) The options provided in this subsection shall not apply after July 1, 1977.

(f) When on or more sources are emitting sulfur oxides at rates in conformity with applicable maximum allowable emission rates, and the ambient air quality for sulfur dioxide is being exceeded, the health officer shall be responsible for setting emission standards for sources contributing to the sulfur oxides in the ambient air at such value as the health officer may consider necessary to achieve the desired air quality.

(g) When ambient air concentrations of sulfur dioxide have been determined to exceed applicable ambient air quality standards of section 3-15, the option provided in subsection (e) of this section shall not apply.

(11.0) Section 3-25 Hazardous Air Contaminants

(a) Hazardous air contaminants are any air contaminants which may cause or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness. The health officer may from time to time, without public hearing, designate hazardous air contaminants and establish emission standards for such hazardous air contaminants as they are defined in the Federal Register.

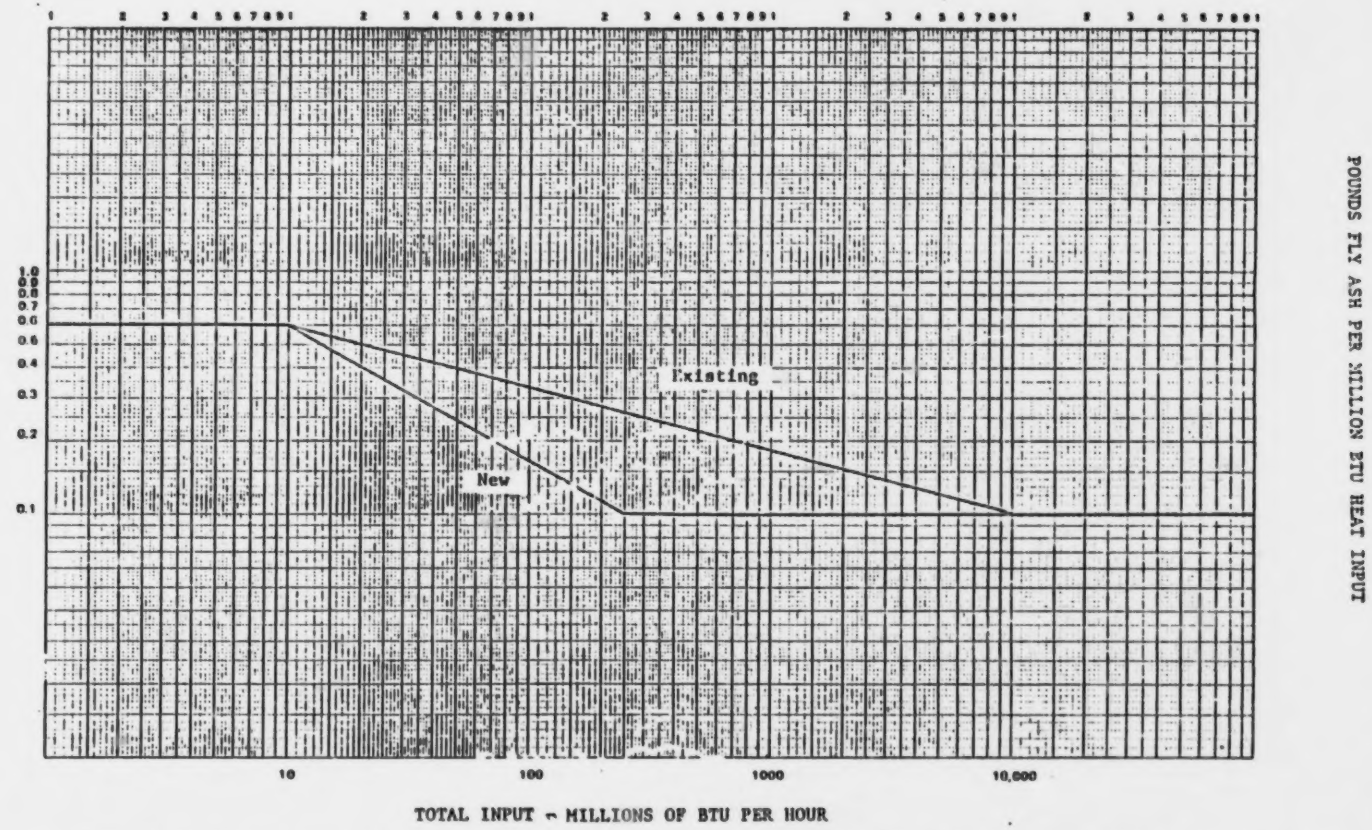
(b) The owner or operator of one or more sources of hazardous air contaminants in existence on the date of designation of a hazardous air contaminant shall, within six (6) months from that date, file with the health officer information necessary to allow the evaluation of the air pollution potential of such emissions.

(10.0) Section 3-26 Performance Standards for New Stationary Sources

Any person planning to construct a new installation, which might reasonably be expected to contribute to air pollution, or make modifications to an existing installation, which will or might reasonably be expected to increase or change the characteristics of the air contaminants discharged, shall comply with standards of performance for new stationary sources as such standards are published from time to time in the Federal Register.

Section 3-27 Figure 1; Table 1, Table 2, Table 3, and Table 4.

FIGURE 1



MAXIMUM PERMISSIBLE EMISSION OF FLY ASH AND OTHER PARTICULATE MATTER FROM FUEL BURNING INSTALLATIONS

TABLE I

AMBIENT AIR QUALITY STANDARDS

Contaminant	Primary Standard			Secondary Standard		
	Concentration		Averaging Interval	Concentration		Averaging Interval
	ug/m^3	ppm by vol.		ug/m^3	ppm by vol.	
Suspended Particulates	75	--	AGM	60	--	AGM
	260	--	24 hr.	150	--	24 hr.
Sulfur Dioxide	80	0.03	AAM	60	0.02	AAM
	365	0.14	24 hr.	260	0.139	24 hr.
				1,300	0.5	3 hr.
Carbon Monoxide	10,000	9.0	8 hr.	10,000	9.0	8 hr.
	40,000	35.0	1 hr.	40,000	35.0	1 hr.
Photo-Chemical Oxidant	160	0.08	1 hr.	160	0.08	1 hr.
*Hydrocarbons (non-methane)	160	0.24	3 hr. a.m.	160	0.24	3 hr. a.m.
Nitrogen Dioxide	100	0.05	AAM	100	0.05	AAM

* The hydrocarbon standard is for use as a guide in devising implementation plans to achieve oxidant standards.

Notes: 1. All values other than annual values are maximum concentrations not to be exceeded more than once per year.

2. PPM values are approximate only.
3. All concentrations relate to air at standard conditions of 25^{0} C temperature and 760 millimeters of mercury pressure.
4. ug/m^3 - micrograms per cubic meter.
5. AGM - Annual Geometric Mean.
6. AAM - Annual Arithmetic Mean.

TABLE 2

EXISTING PROCESS EMISSION SOURCES ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE[a]

Process Weight Rate Lb/Hr	Rate of Emission Lb/Hr	Process Weight Rate Lb/Hr	Rate of Emission Lb/Hr
100	0.551	16,000	16.5
200	0.877	18,000	17.9
400	1.40	20,000	19.2
600	1.83	30,000	25.2
800	2.22	40,000	30.5
1,000	2.58	50,000	35.4
1,500	3.38	60,000	40.0
2,000	4.10	70,000	41.3
2,500	4.76	80,000	42.5
3,000	5.38	90,000	43.6
3,500	5.96	100,000	44.6
4,000	6.52	120,000	46.3
5,000	7.58	140,000	47.8
6,000	8.56	160,000	49.0
7,000	9.49	200,000	51.2
8,000	10.4	1,000,000	69.0
9,000	11.2	2,000,000	77.6
10,000	12.0	6,000,000	92.7
12,000	13.6		

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[a] Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation:

$$E = 4.10\ P^{0.67}$$

and interpolation and extrapolation of the data from process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$$E = 55.0\ P^{0.11} - 40$$

Where E = rate of emission in lb/hr
P = process weight in tons/hr.

TABLE 3

NEW PROCESS EMISSION SOURCES
ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE[a]

Process Weight Rate Lb/Hr	Rate of Emission Lb/Hr	Process Weight Rate Lb/Hr	Rate of Emission Lb/Hr
50	0.03	16,000	13.0
100	0.55	18,000	14.0
200	0.86	20,000	15.0
400	1.32		
600	1.70	30,000	19.2
800	2.03	40,000	23.0
1,000	2.34	50,000	26.4
1,500	3.00	60,000	29.6
2,000	3.59	70,000	30.6
2,500	4.12	80,000	31.2
3,000	4.62	90,000	31.8
3,500	5.08	100,000	32.4
4,000	5.52	120,000	33.3
5,000	6.34	140,000	34.2
6,000	7.09	160,000	34.9
7,000	7.81	200,000	36.1
8,000	8.5	1,000,000	46.7
9,000	9.1		
10,000	9.7		
12,000	10.9		

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[a] Interpolation of the data in Table 2 for the process weight rates up to 60,000 lbs/hr shall be accomplished by the use of the equation:

$E = 3.59\ P^{0.62}$ $\quad$ $P \leqq 30$ tons/hr

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs/hr shall be accomplished by use of the equation:

$E = 17.31\ P^{0.16}$ $\quad$ $P > 30$ tons/hr

Where: E = Emissions in pounds per hour
P = Process weight rate in tons per hour

TABLE 4

ALLOWABLE RATE OF PARTICULATE EMISSION BASED ON PROCESS WEIGHT RATE
EXISTING FERROUS JOBBING CUPOLAS

Process Weight (#/hr)	Maximum Weight Discharge (#/hr)
1,000	3.05
2,000	4.70
3,000	6.35
4,000	8.00
5,000	9.58
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
16,000	21.60
18,000	23.40
20,000	25.10

The emission rate for a process weight intermediate to those shown in the Table shall be determined by linear interpolation.

Sections 3-28, 3-29, 3-30, 3-31, 3-32, 3-33, 3-34. Reserved.

(16.0) Article III. Air Pollution Control Hearing Board

(16.0) Section 3-35 Created; Membership; Term of Office; Jurisdiction; Hearings; Appeals

(a) There is hereby created the Memphis and Shelby County Air Pollution Control Board, hereinafter referred to as "the Board" to be composed of seven (7) members to be appointed jointly by the Mayor of the City of Memphis and the Shelby County Commissioner of Health and confirmed by both the Memphis County Council and the Shelby County Quarterly Court. The Board shall consist of the following: One professional engineer knowledgeable in the field of air pollution control, one physician licensed to practice in Tennessee, one attorney licensed to practice law in Tennessee, a prepresentative of industry at large, and such other citizen members as may be appointed, except that industry may have no more than two representatives. No member of the Board shall hold any elective office or receive any governmental salary. All members shall serve without compensation.

(b) The terms of members shall be four (4) years except that of the initially appointed members, two shall serve for four (4) years, two shall serve for three (3) years, two shall servce for two (2) years and one shall serve for one (1) year as designated at the time of appointment. Whenever a vacancy occurs, the vacancy shall be filled for the unexpired term in the same manner as the original appointment. Initial appointments shall be for terms expiring June 1, 1973.

(c) The Board shall select annually a chairman from among its members. The Board shall hold at least four (4) regular meetings each year and such additional meetings as the chairman deems necessary. The health officer shall act as secretary to the Board and shall keep records of its hearings and other official actions. All hearings shall be held before and not less than a majority of the Board.

(d) The Board is hereby vested with the following jurisdication and authority:

(1) Grant, deny or revoke variance applications.

(2) To decide appeals from any decisions, rulings, or determinations of the health officer or his designated representative under this chapter.

(3) To hear appeals arising from the failure of the health officer or his designated representative to act within a reasonable period on complaints under this chapter.

(e) Any person seeking a variance from the provisions of this chapter or any person taking exception to and who is uniquely affected by any decision, ruling, requirement, rule, regulation, or order of the health officer or by his failure to act within a reasonable amount of time may take an appeal to the Board as established by this section. Such appeals shall be made within fifteen (15) days after receiving notice of such decision, ruling, requirement, rule, regulations, or order or failure to act by filing a written notice of appeal directly to the Board specifying the ground thereof and the relief requested. Such an appeal shall act as a stay of the decision, ruling, requirement, rule, regulation, or order in question until the Board has taken final action on the appeal, except when the health officer has acted under section 3-4, "Emergency Order." The Board, not less than thrity (30) days after the date of filing an appeal, shall set a date for the hearing and shall give notice thereof, by mail to the interested parties.

(f) Hearings before the Board shall be conducted in the following manner:

(1) Notice of any and all hearings shall be given at least fifteen (15) days prior to the scheduled date of the hearing by public advertisement in a newspaper of general circulation in Memphis, Tennessee giving the date, time, place and purpose of the hearing.

(2) The chairman of the Board shall act as the hearing examiner to conduct such hearing.

(3) Any person seeking a variance of any party who is uniquely affected by the action of the health officer or his failure to act, may appear in person or by agent or attorney and present evidence both written or oral perinent to the questions and issues involved and may examine and cross examine witnesses.

(4) All testimony shall be under oath and recorded. The Board is authorized to have all testimony transcribed and a transcript of such testimony, if transcribed, shall be made available to the respondents or any party to the hearing upon payment of the normal fee, which shall not exceed the cost of transcribing such testimony.

(5) After due consideration of the written and oral statements, the testimony and arguments submitted at the hearing upon such complaint, or, upon default in appearance of the respondent on the return date specified in the formal notice of complaint, the Board shall issue and enter such final order to make such final determination as it shall deem appropriate, and shall immediately notify the respondent thereof, in writing, by certified mail. Such order or determination shall be approved by at least a majority of members to which the Board is entitled.

(6) Upon failure of the Board to enter a final order or determination within sixty days after the final argument of any such hearing, the respondent shall be entitled to treat for all purposes such failure to act as a finding favorable to the respondent.

(7) The burden of proof in such hearing shall be on the health officer or his duty authorized representative.

(8) Any person aggrieved by any final order or determination of the Board hereunder shall have judicial review thereof by common law writ of certiorari. No judicial review shall be available until and after all administrative remedies have been exhausted.

METROPOLITAN HEALTH DEPARTMENT

The Code of The

Metropolitan Government Of

Nashville and Davidson County, Tennessee

(1.0) Section 4-1-1. Definitions

For the purposes of this chapter, the following words and phrases shall have the meanings respectively ascribed to them by this section:

Air contaminant. Any particulate matter or any gas or vapor or any combination thereof.

Air Pollution. The presence in the outdoor atmosphere of one or more air contaminants in such quantities, characteristics or duration as is or tends to be injurious to human health or welfare, or animal or plant life or health, or property, or would interfere with the enjoyment of life or property.

ASME. The American Society of Mechanical Engineers.

ASTM. The American Society of Testing and Materials.

Board. The Metropolitan Board of Health.

Breeching. Any conduit for the transport of products of combustion or processes to the atmosphere or to any intermediate device before being discharged into the atmosphere. Such term does not include the chimney or stack.

Cleaning fires. The act of removing ashes from the fuel bed or furnace.

Continuous monitoring. The sampling and analysis of air contaminants in a continuous or timed sequence, using techniques which will adequately effect actual emission levels or ambient concentrations on a continuous basis.

Department. The department of health of the Metropolitan Government, including the Board, agents, employees, and divisions.

Director. The chief administrative officer of the Metropolitan Board of Health or his designated representative.

Emission. The act of releasing or discharging air pollutants into the ambient air from any source.

Existing source. Any equipment, machine, device, article, contrivance, or installation which was in existence on the effective date of this chapter, except that any existing equipment, machine, device, article, contrivance, or installation which is altered, replaced or rebuilt that increases the amount of air contaminant emitted by such source or which results in the emission of any air contaminant not previously emitted shall be reclassified as a new source.

Fuel burning equipment. Any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.

Fugitive dust. Is any solid, airborne particulate matter emitted from any source other than a stack.

Hand-fired fuel burning equipment. Fuel burning equipment in which fresh fuel is manually introduced directly into the combustion chamber but not including fireplaces.

Hazardous material. Is any air contaminant which may cause, or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness and has been in the Federal Register.

Incinerator. Any equipment, device, or contrivance used for the destruction of refuse by burning, and all appurtenances thereto.

Internal combustion engine. Any engine in which the combustion of gaseous, liquid, or pulverized solid fuel takes place within one or more cylinders.

Mechanical fuel burning equipment. Fuel burning equipment incorporating means by which fuel is mechanically introduced into the combustion chamber.

Mist. A suspension of any finely-divided liquid in any gas or atmosphere.

Multiple chamber incinerator. Any article, machine, equipment, or contrivance or part of a structure used to dispose of refuse or garbage by burning, consisting of three or more refactory-lined combustion chambers in series, physically separated by refactory walls, interconnected by gas passage ports or ducts and employing adequate design necessary for maximum combustion of material to be burned.

Opacity. A state which renders material partially or wholly imprevious to ray of light and causes obstruction of an observer's view.

Open burning. Any fire from which the products of combustion are emitted directly into the open air without passing through a stack or chimney.

Particulate matter. Any material, except water in uncombined form, that is or has been airborne and exists as a liquid or a solid as standard conditions.

Person. Any individual natural person, trustee, court appointed representative, syndicate, association, partnership, firm, club, company, corporation, business trust, institution, agency, government corporation, municipal corporation, city, county, municipality, district, or other political subdivision, department, bureau, agency, or instrumentality of Federal, State, or local government, or other entity recognized by law as the subject of rights and duties. The masculine, feminine, singular, or plural is included in any circumstances.

Process equipment. Any equipment, device or contrivance for changing any materials whatsoever or for storage or handling of any materials, the use of existence of which may cause any discharge of air contaminants into the open air but not including that equipment specifically defined as "fuel burning equipment" or "incinerator" in this section.

Process weight. The total weight of all materials introduced into a source operation including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for purposes of combustion.

Refuse. The inclusive term for solid waste products which are composed wholly or partly of such materials as garbage, sweepings, cleanings, trash, rubbish, litter, industrial solid waste or domestic solid waste, trees or shrub leaves, limbs, trunks, roots or droppings or trimmings, grass clippings, brick, plaster or other waste resulting from the demolition, alteration, or construction of buildings or structures, accumulated waste material, cans, containers, tires, junk or other such substances which may become a nuisance.

Ringelmann Chart. The chart published and described in the U.S. Bureau of Mines Information Circular 8333.

Salvage operation. Any operation conducted in whole or in part for the salvaging or reclaiming of any product or material.

Smoke. Small gasborne or airborne particles resulting from combustion operations and consisting of carbon and ash and other matter present in sufficient quantity to be observable.

Source. Any property, real or personal, which emits or may emit any air pollutant.

Stack. Any conduit, duct, vent, flue or opening of any kind whatsoever arranged to conduct any products to the atmosphere. Such term does not include breeching.

Standard conditions. A gas temperature of 70 degrees Fahrenheit and a gas pressure of 29.92 inches mercury absolute.

Stoker. Any mechanical device that feeds solid fuel uniformly onto a grate or hearth within a furnace.

(50.1.2) Section 4-1-2. Visible Emission Regulations

(a) No person shall cause, suffer, allow or permit emission of smoke from any air contaminant source, the shade or appearance of which is as dark or darker than No. 1 of the Ringelmann Smoke Chart.

The provisions of this subsection of this section shall not apply to smoke emitted during the cleaning of a fire, the building of a new fire, or the blowing of soot from boiler surfaces. Under these conditions, smoke not darker than No. 3 on the Ringelmann Smoke Chart may be emitted for a period or periods aggregating no more than five (5) minutes in any sixty (60) consecutive minutes or more than twenty (20) minutes in any twenty-four (24) hour period.

The provisions of this subsection of this section shall not apply to the smoke resulting from any fire ignited for the purpose of training firemen or for research in fire protection or prevention, nor to uncontrollable emissions occasioned by breakdown of fuel-burning equipment or other failure which is not reasonably preventable, or by the maintaining and repair of air pollution control equipment.

(b) No person shall cause, suffer, allow or permit the discharge into the open air, from any single source of emission whatsoever, of any air contaminant of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (a) of this section provided, that this subsection (b) shall not apply to vision opacity caused by uncombined water droplets.

(c) This section shall not apply to visible emissions from fuel burning equipment used exclusively for heating a dwelling of less than three dwelling units.

(d) The provisions of subsection (a) and (b) of this section shall not apply until October 7, 1973, for installations existing before October 7, 1968. In installations existing before October 7, 1968, no person shall cause, suffer, allow or permit emissions of smoke from any air contaminant source, the shade or appearance of which is as dark or darker than Number 2 of the Ringelmann Chart or an equivalent opacity (40%) for a period or periods aggregating no more than 5 minutes in any 60 consecutive minutes or more than 20 minutes in any 24-hour period. After October 7, 1973, all installations shall comply with the provisions of subsection (a) and (b) of this section.

(51.21) Section 4-1-3. Regulation of importation, sale, transportation, use or consumption of solid and liquid fuels.

(a) It is unlawful for any person to burn, in any fuel burning equipment, any solid or liquid fuel containing in excess of two percent sulfur by weight. If such fuel is not reasonably available, an application for exemption may be made to the board of health, and the board, after considering the factors set forth below, shall allow exemption from this provision when the applicant demonstrates that their activities do not result in the condition of air pollution as defined in section 4-1-1 and further described in the goals set forth in section 4-1-18.

(b) In determining reasonable availability the factors to be considered by the board of health shall include, among others: Price, firmness of supply, extent of existing pollution and assurance of supply under adverse weather and natural disaster conditions. The board shall also consider various alternatives presented by the applicant such as flue gas treatment and stack height measures.

(c) The board, in its discretion, may review such exemptions from time to time and revise same when it finds such changes in circumstances which require additional action on the part of a fuel user to protect the air.

(d) This section shall not be effective until March 1, 1970. (68-554).

(11.0) Section 4-1-4. Hazardous Air Contaminants

(a) Hazardous air contaminants are any air contaminant which may cause or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness. The director may, from time to time, without public hearing, designate hazardous air contaminants and establish emission standards for such hazardous air contaminants as they are defined in the Federal Register.

(b) The owner or operator of one or more sources of hazardous air contaminants in existence on the effective date of designation of a hazardous air contaminant shall, within six months from the date, file with the director, information necessary to allow the evaluation of the air pollutant standpoint of such emissions.

(51.13) Section 4-1-5. Open Burning Regulation

No person shall cause, suffer, allow or permit open burning except as specifically permitted in this Chapter.

(a) Ceremonial or recreational fires of reasonable size and duration. Such fires may not contain material such as plastics, rubber, or similar refuse.

(b) Fires set for the training and instruction of public or private fire-fighting personnel when approval is received from the Director.

(c) Smokeless or safety flares.

(d) Fires used for outdoor cooking where done with equipment or fireplace designed for such purposes and in a manner not offensive to persons in the vincinity thereof.

(e) Fires used for disposing of materials grown on that tract of land, when done with an approved device, at sites approved by the Director, and with a valid permit from the Director.

(f) Such other open burning as may be approved by the Director where there is no other practical, safe, and lawful method of disposal.

(51.9) Section 4-1-6. Incinerator Regulations

(a) No person shall burn any refuse in any incinerator except in a multiple chamber incinerator having a rated capacity of one hundred pounds per hour or greater with adequate auxiliary heat or other approved means to prevent air pollution or an air pollution nuisance. Incinerators of other types may be constructed if in advance of construction, it can be demonstrated to the satisfaction of the Director that they are as effective as incinerators required under the provisions of this chapter insofar as air pollution is concerned. The burden of proof shall rest upon the person constructing or installing the incinerator. The restriction of a capacity of one hundred pounds per hour shall not apply to incinerators designed for and used exclusively as pathological incinerators.

(b) No person shall cause, suffer, allow or permit the emissions from any incinerator having a charge rate of 2,000 pounds per hour or less, particulate matter in quantities exceeding 0.2 grains per standard dry cubic foot of flue gases, adjusted to twelve percent carbon dioxide by volume excluding the contribution of auxiliary fuel.

(c) No person shall cause, suffer, allow or permit the emissions from any incinerator having a charge rate greater than 2,000 pounds per hour, particulate matter in quantities exceeding 0.08 grains per standard dry cubic foot of flue gases, adjusted to twelve percent carbon dioxide by volume excluding the contribution of auxiliary fuel.

(d) Tests to determine compliance with this section shall be performed as provided in Section 4-1-15.

(51.5) Section 4-1-7. Regulations on Fuel Burning Equipment

(a) The emission of particulate matter resulting from the combustion of fuel from any installation of any fuel burning equipment or any stack connected thereto existing before the effective date of this chapter, in quantities exceeding the values specified in Table 1 is prohibited. The maximum allowable particulate emission limits as given in this section are based upon the total plant rate of heat input to one or more stacks. Where natural gas or liquified petroleum gas is used as a fuel, the BTU heat input from these fuels shall not be included.

TABLE I

Total Heat Input In Million BTU/Hr	Maximum Emission Rate In Lbs Per Million BTU Input
10 or less	0.60
20	0.50
50	0.39
100	0.33
500	0.22
1,000	0.18
5,000	0.12
10,000 or greater	0.10

Interpolation of the data in Table I shall be accomplished by the use of the equation: $E=1.09\ (Q)^{-0.2594}$, where E=Emissions in pounds per million BTU input, Q=Total heat input in million BTU/hr.

(b) The emission of particulate matter resulting from the combustion of fuel from any installation of fuel burning equipment or any stack connected thereto beginning operation on or after the effective date of this chapter, in quantities exceeding the values specified in Table II is prohibited.

TABLE II

Total Heat Input In Million BTU/Hr	Maximum Emission Rate in Lbs Per Million BTU Input
10 or less	0.60
20	0.41
50	0.24
100	0.16
200	0.11
250 or greater	0.10

Interpolation of the data in Table II shall be accomplished by the use of the equation $E=2.16\ (Q)^{-0.5566}$, where E=Emissions in pounds per million BTU input; Q=Total heat input in million BTU/hr.

Tests to determine compliance with this section shall be performed as provided in Section 4-1-15.

(c) No new coal burning equipment of less than one million BTU per hour input shall be installed.

(d) The operation of hand-fired fuel burning equipment is prohibited. This subsection (d) shall not apply to fuel burning equipment used exclusively for heating a dwelling of less than three dwelling units or the burning of wood as a fuel in residential fireplaces; excluding all pot bellied stoves.

(e) The burning of refuse in fuel burning equipment is prohibited, except in equipment specifically designed to burn refuse.

(f) The provisions of subsection (a) of this section shall not apply to any installations existing on the effective date of this chapter, the maximum allowable emissions limit shall be 0.60 pounds per million BTU input until October 7, 1973, after which all existing installations shall comply with the provisions of subsection (a) of this section.

(12.0) Section 4-1-8. Regulation on Internal Combustion Engines

(a) No person shall cause, suffer, allow or permit the emission of visible air contaminants, the shade or appearance of which is dark or darker than No. 1 on the Ringelmann Smoke Chart or 20 percent opacity except for periods not exceeding five (5) consecutive seconds.

(b) It shall be unlawful for any pollution control device required by the Environmental Protection Agency, the Air Pollution Control Board of the State or the Metropolitan Health Department for the control of air pollution from motor vehicles to be removed or attended in any way to make them partially or completely inoperable.

(c) All buses and trucks registered in the metropolitan government area shall be equipped with smoke and odor elimination equipment within twelve months after which one or more such devices have been approved by the department or by the Environmental Protection Agency.

(50.1.1) Section 4-1-9. Regulation of Process Emissions

This section applies to any operation, process, or activity except the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials and except the burning of refuse.

(a) No person shall cause, suffer, allow or permit the emission of gas containing sulfur oxides in excess of five hundred ppm (volume). All sampling of exhaust gases to determine compliance with this section shall be performed as provided in Section 4-1-15. For the purposes of this section, all sulfur present in gaseous compounds and containing oxygen shall be deemed to be present as sulfur dioxide.

(b) Process weight per hour means the total weight of all materials introduced into any specific process that may cause any emission of particulate matter. Solid fuels charged are considered as part of the process weight, but liquid and gaseous fuels and combustion air are not. For a cyclical or batch operation, the process weight per hour is derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle. For a continuous operation, the process weight per hour is derived by dividing the process weight for a typical period of time.

(c) No person shall cause, suffer, allow or permit the emission of particulate matter in any one hour from any existing process source in excess of the amount shown in Table III for process weight allocated to such source.

TABLE III
ALLOWABLE RATE OF EMISSION BASED ON PROCESS WEIGHT RATE

Process Weight Rate		Rate Of Emission	Process Weight Rate		Rate Of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
100	0.05	0.551	16,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.00	19.2
600	0.30	1.83	30,000	15.00	25.2
800	0.40	2.22	40,000	20.00	30.5
1,000	0.50	2.58	50,000	25.00	35.4
1,500	0.75	3.38	60,000	30.00	40.0
2,000	1.00	4.10	70,000	35.00	41.3
2,500	1.25	4.76	80,000	40.00	42.5
3,000	1.50	5.38	90,000	45.00	43.6
3,500	1.75	5.96	100,000	50.00	44.6
4,000	2.00	6.52	120,000	60.00	46.3
5,000	2.50	7.58	140,000	70.00	47.8
6,000	3.00	8.56	160,000	80.00	49.0
7,000	3.50	9.49	200,000	100.00	51.2
8,000	4.00	10.4	1,000,000	500.00	69.0
9,000	4.50	11.2	2,000,000	1,000.00	77.6
10,000	5.00	12.0	6,000,000	3,000.00	92.7
12,000	6.00	13.6			

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation: $E=4.10 P^{0.67}$ and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation: $E=55.1 P^{0.11} -40$, where E=rate of emission in lb/hr and P=process weight rate in tons/hr.

(d) No person shall cause, suffer, allow or permit the emission of particulate matter from any process source beginning operation on or after the effective date of this chapter in excess of the amount shown in Table IV for the process weight allocated to such source.

TABLE IV

Process Weight Rate (Lbs/Hr)	Emission Rate (Lbs/Hr)
50	0.03
100	0.55
500	1.53
1,000	2.34
5,000	6.34
10,000	9.73
20,000	14.99
60,000	29.60
80,000	31.19
120,000	33.28
160,000	34.85
200,000	36.11
400,000	40.35
1,000,000	46.72

Interpolation of the data in Table IV for the process weight rates up to 60,000 lbs/hr. shall be accomplished by the use of the equation:

$$E = 3.59 P^{0.62} \quad P \quad 30 \text{ tons/hr.}$$

and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lbs/hr. shall be accomplished by use of the equation:

$$E = 17.31 P^{0.16} \quad P \quad 30 \text{ tons/hr}$$

Where: E = Emissions in pounds per hour
P = Process Weight rate in tons per hour.

(e) Irrespective of the maximum allowable emission as determined by either the process weight tables of subsections (c) or (d) of this section, the maximum allowable concentration of particulate process emissions shall be 0.25 grains per cubic foot of exhaust gases corrected to 70° F and 1 atmosphere.

(f) Subsections (c) and (d) of this section shall not apply to any new source, the construction or modification of which commences after the date of publication in the Federal Register of proposed standards which will be applicable to each source.

The owner or operator of any stationary source, covered by this subsection (f) shall meet the performance standards for New Stationary Sources as designated by the Environmental Protection Agency and published in the Federal Register. The directory may, from time to time, without public hearing, adopt regulations covering the New Stationary Sources Performance Standard as designated by the Environmental Protection Agency and published in the Federal Register.

(50.6) Section 4-1-10. Regulation of Odors in Ambient Air

No person shall cause, suffer, allow or permit any emission of gases, vapors, or objectionable odors beyond the property line from any source whatsoever which causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or, which causes or has a tendency to cause injury or damage to business or property, and constitute a nuisance.

(12.0) Section 4-1-11. Use of Public Facilities or Highways

Any activities causing a reduction in vision or resulting in inference with normal use of public facilities or highways by an emission of dust, fume, gas, mist, odor, smoke, vapor or combinations thereof will constitute a safety hazard or an air pollution nuisance.

(50.1) Section 4-1-12. Regulation of Fugitive Dust

No person shall cause, suffer, allow or permit the handling, transporting, or disposition of any substance or material which is likely to be scattered by the wind, or is susceptible to being wind-borne, without taking adequate precautions or measures to minimize atmospheric pollution. No person shall maintain or cause to be maintained any premises, open area, right of way, storage pile of materials, any construction, ateration, demolition or wrecking operation, or any other enterprise, which involves any material or substance likely to be scattered by the wind or susceptible to being windborne, without applying all such reasonable measures as may be required to prevent particulate matter from becoming air-borne. The Director may require such reasonable measures as may be required to prevent particulate matter from becoming airborne including but not limited to paving or frequent cleaning of roads, driveways, and parking lots, application of dust free surfaces, or the planting and maintenance of vegetative ground cover.

(51.21) Section 4-1-13. Regulation on Laundries, Dry Cleaning Plants, Etc.

No person shall operate a laundry, dry cleaning plant or similar operation unless the following conditions are met:

(a) All driers shall be equipped with lint filters which will substantially prevent the expulsion of materials harmful to the public.

(b) Provision shall be made so that all vent pipes carrying solvent vapor are not directed toward any building openings within twenty feet.

(c) Where the discharge into the atmosphere of fume, gas, mist, lint, odor, smoke, vapor or any combination thereof results in repeated violations of this chapter, additional equipment to insure adequate control shall be provided.

(9.0) Section 4-1-14. Measurement of Emissions of Air Contaminants

(a) The Director may require any person responsible for emission of air contaminants to make or have made at the owner's expense, tests to determine the quantity and quality of the emission of air contaminants from any source, whenever the director has reason to believe that an emission in excess of that allowed by this chapter is occurring. The director may specify testing methods to be used. The director may require that such tests be conducted in the presence of his representative. The director shall be given a copy of the test results in writing and signed by the person responsible for the tests. All tests and calculations shall be made under the direction of a professional engineer registered in the state or be a graduate of an accredited engineering school, and be experienced in his field of endeavor.

(b) At the completion of any new installation, or any significant alteration, the Director may require the owner or person responsible to conduct such tests as are necessary to establish the amount of air contaminants emitted from such equipment or control apparatus. Such tests shall be made at the expense of the owner and shall be conducted in a manner approved by the Director. The Director may require that such tests be conducted in the presence of his representative.

In all new installations, there shall be provided sampling ports of a size, number and location as the Director may require, safe access to each port, any other sampling and testing facilities as the Director may require.

(c) The Director may conduct tests of air contaminants from any source. Upon request of the Director, the person responsible for the source to be tested shall provide, at no expense to the Board, necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, including a suitable power source, exclusive of instruments and sensing devices as may be necessary for proper determination of the level of air contaminants.

(d) The Director may require the owner or operator of any air contaminant source discharging air contaminants, at the expense of the owner or operator, to install, use, and maintain such monitoring equipment as the Director shall prescribe; sample such emissions in accordance with methods as the Director shall prescribe. Records and reports as the Director shall prescribe on air contaminant emissions and fuel analyses shall be recorded, compiled, and submitted in a format as prescribed by the Director.

(e) The Director may require the submission of air pollution information from any or all potential sources of air pollution for purposes of maintaining an air pollution emission inventory. Emission data obtained from owners or operators of stationary sources will be correlated with applicable emission limitations and other control measures and will be available to the public.

(f) When any fuel burning equipment, incinerator, control equipment, or process equipment breaks down in such a manner as to cause the emission of air contaminants in violation of this chapter for an anticipated or actual duration of at least twenty-four hours, the person responsible for such equipment shall immediately notify the Director of such failure or breakdown and provide a statement giving all pertinent information, including the estimated duration of the breakdown. The Director shall be notified when the condition causing the failure or breakdown has been corrected and the equipment is again in operation.

(9.0) Section 4-1-15. Testing

(a) In order to establish a standard procedure for coal and fuel oil analysis, the following procedures or any amendment or modification thereof shall be used:

(1) The heat content of coal shall be determined according to ASTM method D-271-68 Laboratory Sampling and Analysis of Coal and Coke or ASTM method D-2015-66 Gross Caloric Value of Solid Fuel by the Adiabatic Bomb Calorimeter.

(2) The method of determining the ash and sulfur content in coal shall be that described in ASTM D-271-68 Laboratory Sampling and Analysis of Coal and Coke or equivalent method approved by the Board. All coal analysis and heat contents are to be made on a dry basis. Moisture content of coal is to be determined in all cases and results recorded to facilitate calculation of actual pollutants.

The method for determining the sulfur content of fuel oil shall be that described in ASTM D-129-54 Standard Method of Test for Sulfur in Petroleum Products and Lubricants by the Bomb Method. The method of determining the heat content of fuel oil shall be that described in ASTM D-240-64 Standard Method of Test for Heat of Combustion of Liquids by the Parr Bomb Calorimeter or other method giving comparable results.

(3) The Director is authorized to take any quantity of fuel which he deems necessary for the purpose of evaluation to determine compliance with this regulation. Where applicable, the following sampling methods will be used:

(a) For coal:

ASTM: D-492-48 (1958) Sampling Coal Classified According to Ash Content.

ASTM: D-2013-68 Preparing Coal Sample for Analysis.

ASTM: D-2234-68 Mechanical Sampling of Coal.

(b) For oil:

ASTM: D-270-65 Tentative Method of Sampling Petroleum Products.

(b) The method set forth in this subsection shall be applicable for determining compliance with emission standards:

(1) Sample and velocity traverses shall be determined by the method outlined in the Appendix of the Federal Register, Volume 36, No. 247, December 23, 1971.

(2) Determination of stack gas velocity shall be determined by the method outlined in the Appendix of the Federal Register, Volume 36, No. 247, December 23, 1971.

(3) Gas analysis for carbon monoxide, excess air and dry molecular weight shall be accomplished by the method outlined in the Appendix of the Federal Register, Volyme 36, No. 247, December 23, 1971.

(4) Moisture in stack gas shall be determined by the method as outlined in the Appendix of the Federal Register, Volume 36, No. 247, December 23, 1971.

(5) Determination of particulate matter from stationary sources shall be determined by the method outlined in the Appendix of the Federal Register, Volume 36, No. 247, December 23, 1971, with this added condition: the analytical results shall include particulate matter collected in the impinger train except for the new stationary sources required to meet the performance standards of Section 4-1-9, Subsection (f) of this Chapter.

Any method of continuous monitoring in stacks approved by the Director may be used in accordance with good professional practice.

(6) Determination of sulfur dioxide from stationary sources shall be determined by the method outlined in the Appendix of the Federal Register, Volume 36, No. 247, December 23, 1971.

(7) Determination of nitrogen oxide emissions from stationary sources shall be determined by the method outlined in the Appendix of the Federal Register, Volume 36, No. 247, December 23, 1971.

(8) Determination of sulfuric acid mist emission from stationary sources shall be determined by the method outlined in Appendix of the Federal Register, Volume 36, No. 247, December 23, 1971.

(c) Determination of ambient air sampling and analysis for suspended particulates, sulfur dioxide, carbon monoxide, photochemical oxidants, and nitrogen dioxide shall be by the methods outlined in the Federal Register, Volume 36, No. 158, Saturday, August 14, 1971. Any other method of monitoring that is approved by the Director may be used in accordance with good professional practice. The Director may, from time to time, determine methods of analysis for additional air contaminants as designed by the Environmental Protection Agency and published in the Federal Register.

(d) When new analytical methods become available which are superior to the methods stipulated in this section, the Board, upon the recommendation of the Director, may approve the new methods as alternatives to those set forth in this section.

(3.0) Section 4-1-16. Registration and Permits

(a) Construction Permits

(1) It shall be unlawful for any person to install, erect, construct, reconstruct, alter, or add to, or cause to be installed, erected, constructed, reconstructed, altered, or added to, any fuel burning equipment, incinerator, process equipment, control device, or any equipment pertaining thereto, or any stack or chimney connected therewith, or to make or cause to be made any alteration or repairs which increases the amount of any air contaminant emitted by such source on which results in the emission of any air contaminant not previously emitted until application for a Construction Permit has been filed with the Metropolitan Health Department and plans and specifications applicable to the work have been submitted to the Director and a Construction Permit issued by him for such construction, installations, alterations or repairs. Applications for a construction permit shall be filed in duplicate in the offices of the Director on forms adopted by the Director and supplied by the Metropolitan Health Department along with a copy of plans and specifications. If, within thirty days of the receipt of the application, plans, specifications or other information required, the Director determines that the proposed source will operate in violation of this chapter or the source will prevent or interfere with attainment or maintenance of any national standard, he shall issue an order prohibiting the construction. installation, or establishment of the air contaminant source or sources. Issuance of a construction permit within the time prescribed herein shall be deemed a determination that the construction, installation, or establishment may proceed; provided that it is in accordance with the application, plans, specifications, or other information as submitted to the Director. This section shall not apply to fuel burning

equipment used exclusively for heating less than three dwelling units, or to gas, or fuel oil equipment of 500,000 BTU input or less or to internal combustion engines.

In addition to any other remedies available on account of the issuance of an order prohibiting construction, installation, or establishment of any fuel burning equipment, incinerator, process equipment, or control devices and prior to invoking any such remedies, the person aggrieved thereby shall, upon request in accordance with the provisions of this chapter and the rules and regulations adopted by the Board be entitled to a hearing before the Board. Following such hearing the order shall be affirmed, modified, or withdrawn by the Board.

The absence or failure to issue a rule, regulation or order to this section shall not relieve any person from compliance with any emission control requirements or with any other provisions of law.

(2) Maintenance or repairs or alterations which are minor in scope or do not change the capacity of any fuel burning equipment, incinerator, process equipment and which do not involve any change in the method of combustion or materially affect the emission of smoke, dust, gases, fumes, or other air contaminants therefrom may be made without placing an application for construction permit with the Metropolitan Health Department. Emergency repairs may be made prior to the application in the event an emergency arises and serious consequences would result if the repair were to be deferred. When such repair is made in an emergency, the application is required by this section shall be filed in the office of the Director within ten days after the start of such work.

(3) The plans and specifications, submitted pursuant to this section, concerning any fuel burning equipment, incinerator, process equipment, shall show the type, form and dimensions of all equipment and appurtenances thereto and stacks and dusts, together with the description and dimensions of the building or part thereof in which such equipment is to be located, the amount of work or the amount of heating to be done by such equipment and all provisions for air contaminants. Such plans and specifications shall also show the character of the fuel or refuse to be burned or process material, the maximum quantity to be burned per hour, and the operation requirements of the equipment. The plans and specifications shall show that the room or premises in which the fuel burning equipment or incinerator is to be located is provided with adequate ventilation to provide sufficient air for the combustion process and for the safety of people.

(4) The plans and specifications submitted pursuant to this section shall be prepared under the direction of, or approved by and bear the seal of, a professional engineer registered in this state or be a graduate of an accredited engineering school and experienced in his field of endeavor.

(5) The requirement for filing plans and specifications involving the installation, erection, construction, reconstruction, alteration, or repair of or addition to, any fuel burning equipment, incinerator, process equipment, or the building of pilot plants or processes to be used in or to become part of a secret process is hereby suspended upon the filing with the Metropolitan Health Department, in lieu of the filing of plans and specifications, of an affidavit of a responsible person to the effect that such equipment or process is to be so used. Such person may be required by the Board to furnish bond or other proof of financial responsibility. The suspension of the filing of such plans and specifications shall in no way relieve the person or persons responsible for the secret process from complying with all other provisions of this chapter.

(6) If the installation, erection, construction, reconstruction, alteration, addition or repair is not started within one year of the date of issuance of a construction permit or any extended period granted in writing by the Director, the construction permit shall become void.

(7) Any equipment covered by this section which is installed, erected, constructed, reconstructed, or altered without making application for a construction permit to the Department of Health and receiving this permit as provided herein may be sealed by the Director with the approval of the Board, the seal to remain in effect until all provisions of this chapter have been complied with. This remedy is not deemed to be the exclusive remedy.

(8) The receipt of a construction permit from the Metropolitan Health Department shall it be construed to indicate approval of the strength or safety of any equipment or to indicate compliance with the requirements of the Building Code of Metropolitan Nashville and Davidson County or any other ordinance thereof. Nor shall it relieve anyone from the necessity for obtaining a building, electrical, plumbing, or other permit it required by the provisions of this Code or other ordinance of Metropolitan Nashville and Davidson County.

(b) Temporary Operating Permit

(1) No person shall operate or cause to be operated any new or altered fuel burning equipment, incinerator, process equipment, control device, or any equipment pertaining thereto for which a Construction Permit was required, until application for a Temporary Operating Permit has been filed with the Metropolitan Health Department and a Temporary Operating Permit has been issued by the Director. Application for a Temporary Operating Permit shall be filed in duplicate in the offices of the Director, on forms adopted by the Director and supplied by the Metropolitan Health Department. The person responsible for the installation, construction, or alteration of any fuel burning equipment, incinerator, process equipment, control device, or any equipment pertaining thereto for which a Construction Permit is required, shall give notification to the Director when the work is completed and

ready for final inspection. The Director, with the approval of the Board, is hereby authorized to seal the equipment in operation for which Temperary Operating Permit was obtained as required by this section.

(2) Failure to operate successfully under test within the limitations and requirements of the chapter under a Temporary Operating Permit shall constitute sufficient grounds for ordering changes in the installation before an Operating Permit can be granted. Responsibility for proof, and all expenses incurred in running the tests under the Temproary Operating Permit shall be borne by the person owning, operating, or in charge of control of such equipment or their agents. The Director may waive the demonstration or test operation under the Temporary Operating Permit, but such waiver shall in no manner provide immunity from prosecution for violations of the requirements of this chapter.

(3) The Director or his authorized representative shall have the right to enter the owner's premises to inspect the installation and observe any test or operation of the equipment for which a Temporary Operating Permit was issued.

(4) A Temporary Operating Permit shall be valid for not in excess of six months after the date of issue and upon the expiration of said six months application for a Operating Permit must be made as is herein provided.

(c) Operating Permit

(1) After the Temporary Operating Permit has been issued and it is demonstrated to the satisfaction of the Director that the fuel burning equipment, incinerator, process equipment, control device, or any equipment pertaining thereto can be operated in compliance with this chapter, an application for an Operating Permit shall be filed in duplicate in the office of the Director on forms adopted by the Director and supplied by the Metropolitan Health Department. Said Operating Permit shall be kept posted on or near the installation for which it was issued. The Operating Permit shall properly identify the equipment to which it pertains and shall specify the class of fuel, and or type of raw material used, for which the equipment and appurtenances have been designed or which has been successfully used in the operating test. The owner or his agent shall be responsible for notifying the Director that equipment for which a Temporary Operating Permit has been issued, has been tested and is ready for permanent operation. With such notification the owner shall submit to the Director test and operation data, as required by the Director, obtained during the temporary operating period for use as evidence that the equipment will operate in compliance with all provisions of this chapter. The Director, with the approval of the Board is hereby authorized to seal the equipment in operation for which an Operating Permit has not been obtained, as required by this section.

The Operating Permit shall be issued for a one year period or for such longer period as the Director may designate. Applications for renewal of the Operating Permit shall be made in writing upon forms furnished by the Metropolitan Health Department and shall be made not less than sixty days prior to expiration of the Certificate for which renewal is sought. Disclosures of information, tests and other prerequisites to the issue of a Construction Permit, Temporary Operating Permit, or Operating Permit may be required by the Director prior to the renewal of an Operating Permit.

(2) The Director, as stated in Section 4-1-14, is authorized to conduct or cause to be conducted by the owner any test of any new or installed equipment, the operation of which, in his opinion, can be expected to result in emissions in excess of the limitations of this chapter, or when, in his judgment, there is evidence that any such equipment is exceeding any emission limitation prescribed in said chapter.

The Director may, at his discretion, accept certification tests submitted by the owner, if, in his judgement, these tests are sufficient to determine that the limitations of this chapter will not be exceeded.

(3) Any person operating an air contaminant source constructed on or before the effective date of this chapter shall file an application for an Operating Permit with the Director within six months of the effective date of this chapter. The application of an Operating Permit shall be filed in duplicate in the office of the Director on forms supplied by the Metropolitan Health Department. The Operating Permit shall be issued on evidence satisfactory to the Director that the operation of said source is in compliance with all sections of this chapter.

(d) Any permit issued in accordance with the provisions of this chapter is not transferable from one person to another person nor from one facility to another facility without prior approval from the Director.

(e) The Director may suspend or revoke either a Construction or an Operating Permit if the permit holder fails to comply with the provisions, stipulations, or compliance schedule provided in the permit.

(f) No person shall be required to obtain or file a request for a Construction and Operating Permit due to ownership or operation of the following air contaminant sources unless specifically required to do so by the Director:

(1) Mobile sources such as automobiles, trucks, buses, locomotives, planes, and boats.

(2) Fuel burning equipment of less than 500,000 BTU/Hr. capacity.

(3) Sources discharging less than 0.5 lbs/hr of none hazardous particulates from a single stack or less than 2.0 lbs/hr of none hazardous particulates from two or more stacks, whichever is more restrictive.

(4) Equipment used on farms for soil preparation to tending of crops or for preparation of feed to be used on the farm where prepared.

(3.0) Section 4-1-17. Fees For Permits

The Metropolitan Board of Health by rule or regulation may prescribe and provide for the payment and collection of reasonable fees for the issuance of all permits as specified in Section 4-1-16. All fees collected by virtue of this Chapter shall be deposited regularly with the Metropolitan Treasurer.

(4.0) Section 4-1-18. Ambient Air Quality Standards

The Ambient Air Quality Standards define levels of air quality believed adequate with an appropriate margin of safety to protect the public welfare from any known anticipated adverse effects by the pollutant.

These ambient air quality standards shall not be construed, appeared on interpeted to allow any significant deterioration of the existing air quality in any section of Davidson County.

AMBIENT AIR QUALITY STANDARDS

Pollutant	Concentration	Remarks
1) Suspended Particulates	60 micrograms/m^3	Annual geometric mean.
	150 micrograms/m^3	24-hr. maximum not to be exceeded more than once a year.
2) Sulfur Dioxide	0.02 ppm	Maximum annual average.
	0.10 ppm	24-hr. average not to be exceeded more than once a year.
	0.50 ppm	Maximum 3-hr. concentration not to be exceeded more than once a year.

3) Nitrogen Dioxide	0.05 ppm	Annual arithmetic mean.
4) Carbon Monoxide	9 ppm	8-hr maximum not to be exceeded more than once a year.
	35 ppm	1-hr maximum not to be exceeded more than once a year.
5) Hydrocarbon	0.24 ppm	3-hr maximum not to be exceeded more than once per year.
6) Oxidant	0.08 ppm	1-hr maximum not to be exceeded more than once a year.
7) Dustfall	10 tons/mi^2/mo.	3-mo average above background in all areas except those zoned heavy industrial.
	15 tons/mi^2/mo.	3-mo average above backgound in zoned heavy industrial areas.
8) Soil Indix	0.5 Coh per 1,ooo lineal feet	Annual geometric mean.
	3.0 Coh per 1,000 lineal feet	Not to be exceeded over 1 day in any consecutive 100 day period.
9) Suspended Sulfate (analysis of High volume filters)	4 micrograms/m^3	Allowable maximum annual average.
	12 micrograms/m^3	Not to be exceeded over 1 percent of the time.
10) Sulfate	0.25 mgSO$_3$/100 cm^2/day	Maximum annual average.
	0.50 mgSO$_3$/100 cm^2/day	Maximum month average.
11) Hydorgen Sulfide	0.05 ppm	½-hr average not to be exceeded over 2 percent per year.
	0.03 ppm	½-hr average not to be exceeded over 2 times in any 5 consecutive days.

(16.0) Section 4-1-19. Powers and Duties of the Board

(a) There is hereby imposed upon the Board in addition to those functions and duties set forth in article 10, chapter 1, of the Charter of the Metropolitan Government, the authority, power and duty to adopt, promulgate and enforce such rules and regulations to carry out the provisions of this chapter which the Board deems necessary in order to achieve and maintain such levels of air quality as will protect human health and safety and to the greatest degree practical, prevent injury to plant life and property, foster the comfort and convenience of the inhabitants of the Metropolitan Government area and promote the economic and social development of the Metropolitan Government area; provided, that such rules and regulations shall not conflict with any laws of the state, the Charter or the Metropolitan Government or any ordinance of the Metropolitan Government, nor shall such rules and regulations exceed the limits of authority granted to the Board in this Chapter.

The Director shall recommend to the Board such rules and regulations as he considers necessary consistent with the general intent and purpose of this chapter to prevent, abate, and control air pollution. Thereupon, the Board shall fix and hold a public hearing, as provided herein, with respect to the rules or their amendments, and the Board may approve or reject such recommended rules or amendments, in whole or in part, or it may modify and approve them as so modified. Thereafter, the Board may amend or add to the rules and regulations, on recommendation of the Director, or on its own initiative, but only after a public hearing on the proposed amendments.

Such rules and regulations or any amendments thereto shall be approved by the Director as law as to legality, and the same shall then be filed with the secretary of the Board and the Metropolitan clerk. After such rules and regulations or any amendments thereto of the board have been so adopted in the manner herein provided, such rules and regulations shall be the force and effect of law.

(b) In exercising its power to prevent, abate, and control air pollution, the Board shall have the following powers and duties:

(1) Develop and prepare a general comprehensive plan for prevention, control and abatement of air pollution recognizing varying requirements for different areas of the Metropolitan Government.

(2) Establish, modify, or amend, after public hearing, a system of permits applicable to installation or modification of facilities capable of becoming a source of air pollution.

(3) Establish, modify, or amend without hearing, rules and regulations with respect to procedural aspects of (a) hearings; (b) filing of reports and orders; (c) issuance of permits; and (d) all other matters not specifically requiring a hearing.

(4) Require that any person whom the Board has reason to believe is or may be about to be causing or contributing to air pollution to furnish the Board pertinent information required by it in the discharge of its duties under this chapter; provided, that no such person shall be required to disclose any secret formulae, processes, or methods used in any manufacturing operation carried on by him or under his direction.

(5) Cause to be instituted in a court of competent jurisdiction, legal proceedings to compel compliance with any provision of this Ordinance or with any order or determination issued by the Board.

(6) Collect and disseminate information relative to air pollution, encourge voluntary co-operation of affected persons or groups in preserving and restoring a reasonable degree of air purity and advise, consult and co-operate with other agencies, persons or groups in matters pertaining to air pollution.

(7) Prescribe and provide, at its discretion, for payment and collection of reasonable fees for the review of plans and specifications to be submitted pursuant to this chapter. Such fees shall be deposited with the Metropolitan Treasurer and shall be used to supplement the budget of the Metropolitan Health Department.

(8) Adopt, promulgate and enforce such other rules and regulations which the Board deems necessary to carry out the provisions of this chapter; provided, that nothing in this chapter shall be deemed to grant the Board any jurisdiction or authority with respect to air pollution existing solely within commercial or industrial plants, works or shops or to affect the relationship between employers and employees with respect to or arising out of any condition or air pollution.

(16.0) Section 4-1-20. Facts and Circumstances to be Considered by the Board

In the exercise of its power to prevent, abate and control air pollution, the Board shall give due consideration to such pertinent facts and circumstances, including but not limited to:

(a) The character and degree of injury to, or interference with, the protection of the health, general welfare and physical property of the residents of the Metropolitan Government area.

(b) The social and economic value of the air contaminant source.

(c) The suitability or unsuitability of the air pollution source to the area in which it is located.

(d) The technical practicability and economic reasonableness of reducing or eliminating the emission of such air contaminants.

(16.0) Section 4-1-21. Procedure for Public Hearings by Board of Health

No standard, rule or regulation shall be adopted by the Board pursuant to section 4-1-19, and no amendment, repeal or modification thereof, shall take effect except after a public hearing has been held thereupon before at least a majority of the members to which the Board is entitled. Hearings before the Board shall be conducted in the following manner:

(a) A public notice of any and all public hearings pursuant to this chapter shall be given at least thirty days prior to the scheduled date of the hearing by public advertisement on three consecutive days in a newspaper or newspapers of general circulation within the Metropolitan Government area, giving the date, time, place and purpose of such hearing.

(b) At such hearings, opportunity to be heard by the board with respect to the subject thereof shall be given to any interested person. Any interested persons, whether or not heard, may submit, in writing, a statement of their views on the proposed rules and regulations prior to or within seven (7) days subsequent to such hearings.

(c) No rule or regulation of the Board, or any amendment, repeal or modification thereof, shall be deemed adopted or in force and effect until it shall have been approved, in writing, by at least the majority of the members to which the Board is entitled and the same shall have been approved by the Director of law as to its legality and a certified copy thereof has been filed with the Metropolitan clerk.

(d) Any person heard or represented at such hearing or requesting notice shall be given, without charge, written notice of the action of the Board with respect to the subject thereof. A reasonable record shall be made and maintained of any such public hearing and the testimony at such hearings may or may not be under oath, at the discretion of the Board. Copies of the proceedings at the public hearing shall be made available only upon the payment of the fee therefor, which fee shall be set by the Board of Health.

(16.0) Section 4-1-22. Public Hearings on Complaints Authorized to be Filed With the Board

In addition to the other remedies available, the Director is hereby authorized to file with the Board a complaint of an alleged violation, and the Board may cause to have issued and served upon the person complained against a formal notice of complaint, which shall specify the provision of this chapter of which such person is said to be in violation and a statement of manner and extent to which, if applicable, such person is said to violate this chapter, and shall require the person complained against to answer the charges of such formal complaint at a hearing before the Board. Such hearing before the Board shall be conducted in the following manner:

(a) Such hearings shall be held before the majority of members to which the Board is entitled at a time not less than thirty days nor more than sixty days after the date of notice.

(b) The chairman of the Board is hereby designated as the hearing examiner to conduct such hearing. A complete record of the hearing shall be made for review by the members of the Board.

(c) The respondent to such formal complaint may file a written answer thereto and may appear at such hearing in person or by representative, with or without counsel, and may make oral argument, offer testimony or cross-examine witnesses or take any combination of such actions.

(d) All testimony shall be under oath and recorded. The Board is authorized to have all testimony transcribed and a transcript or such testimony, if transcribed, shall be made available to the respondents or any party to the hearing upon payment of the normal fee, which shall not exceed the cost of transcribing such testimony.

(e) After due consideration of the written and oral statements, the testimony and arguments submitted at the hearing upon such complaint, or, upon default in appearance of the respondent on the return date specified in the formal notice of complaint, the Board shall issue and enter such final order or make such final determination as it shall deem appropriate, and shall immediately notify the respondent thereof, in writing, by certified mail. Such order or determination shall be approved, in writing, by at least a majority of members to which the Board is entitled.

(f) Upon failure of the Board to enter a final order or determination within sixty days after the final argument of any such hearing, the respondent shall be entitled to treat for all purposes such failure to act as a finding favorable to the respondent.

(g) The burden of proof in such hearings shall be on the Director.

(5.0)
(16.0) Section 4-1-23. Variances and Public Hearing Thereon

(a) Any person seeking a variance from the provisions of this chapter or from the rules and regulations adopted by the Board pursuant to this chapter shall do so by filing a petition for variance with the Director. The Director shall promptly investigate such petition and make recommendations to the Board as to the disposition thereof. The Board may grant such variance if it finds that (1) the emissions occurring or proposed to occur, do not endanger or tend to endanger human health or safety, and (2) compliance with the provisions of this chapter and the rules or regulations from which variance is sought would produce serious hardship without equal or greater benefits to the public.

(b) Upon receiving the recommendation of the Director, the Board may, if such recommendation is for the granting of a variance, do so without hearing. If the recommendation of the Director is against the granting of a variance, or the Board, in its discretion, concludes that a hearing would be advisable, then a hearing shall be held not later than sixty days after receipt of a recommendation from the Director. Hearings will be conducted in the following manner:

(1) The petitioner shall be given written notice at the earliest practicable time as to the time and place of such hearing.

(2) The chairman of the Board shall serve as a hearing examiner to conduct hearings, and a complete record of the hearing shall be made for review by the Board members.

(3) All testimony shall be recorded and may or may not be under oath, at the discretion of the Board. The transcript so recorded shall be made available to the petitioner or any party to the hearing upon the payment of the fee for transcribing such testimony.

(4) The Board in considering the granting of a variance shall give due consideration to the equities of the petitioner and others who may be affected by granting or denial of the petition.

(5) The Board may make the granting of a petition for variance contingent upon such other requirements or restrictions on the petitioner as the Board may deem appropriate and reasonable.

(6) Any variance granted shall be for a period not to exceed one year, except as hereinafter provided, but may be extended from time to time by the action of the Board.

(c) If the variance is granted on the ground that there is no practicable means known or available for the adequate prevention, abatement or control become known and available, and subject to the taking of any substitute or alternate measures that the Board may prescribe.

(d) If the variance is granted on the ground that compliance with the particular requirement or requirements from which variance is sought will necessitate the taking of measures which, because of their extent or cost, must be spread over a considerable period of time, it shall be for a period not to exceed such reasonable time as, in the Board, is requisite for the taking of the necessary measures. A variance granted on the ground specified herein shall contain a timetable for the taking of action in an expenditious manner and shall be conditioned on adherence to such timetable.

(e) The Board shall issue and give to the petitioner, in writing, within sixty days following receipt of the recommendation of the Director when no hearing is held, its final order or determination. Such order or determination shall be approved by at least the majority of members to which the Board is entitled.

(f) Upon failure of the Board to issue a final order or determination within sixty days after the final argument in any such hearing or within sixty days following receipt of the recommendation of the Director when no hearing is held the petitioner shall be entitled to treat for all purposes such failure to act as a granting of the variance requested.

(g) The burden of proof in such hearings shall be upon the petitioner.

(h) Nothing in this section and no variance or renewal thereof granted pursuant hereto shall be construed to prevent or limit the application of the emergency provisions and procedures of this chapter to any person or his property.

(8.0) Section 4-1-24. Emergencies

(a) Any other provisions of law to the contrary notwithstanding, if the Director finds that a generalized condition of air pollution exists and that it creates an emergency requiring immediate action to protect human health and safety, the Director shall order persons causing or contributing to the air pollution to reduce or discontinue immediately the emission of air contaminants. Upon issuance of any such order, the Director shall fix a place and time, not later than twenty-four hours thereafter, for a hearing to be held before the Board. Such hearing shall be held in comformity with the provisions of Section 4-1-22, insofar as applicable. Not more than twenty-four hours after the commencement of such hearing, and without adjournment thereof, the Board shall affirm, modify, or set aside the order of the Director.

(b) In the absence of a generalized condition of air pollution of the type referred to in subsection (a) of this section, but if the Director finds that emissions from the operation of one or more air contaminant sources is causing or may tend to cause imminent danger to human health or safety, he may order the person responsible for the operation in question to reduce or discontinue operations immediately, without regard to the provisions of this chapter. In such event, the requirements for hearing affirmance, modification, or setting side of orders set forth in subsection (a) of this section shall apply.

(50.7) Section 4-1-25. Air Pollution Declared a Nuisance; Injunctive Relief

Any person violating the provisions of this chapter by exhausting into the atmosphere an air contaminant in excess of that permitted by this chapter is hereby declared to be creating a nuisance. The Board may cause to be instituted a civil action in any court of competent jurisdiction for injunctive relief to prevent violation of any section of this chapter.

(2.0) Section 4-1-26. Co-ordination Between Health Department, Department of Codes Administration and Planning Commission With Respect to Approval of Installation, Land-Use Plans and Zoning Regulations

The department of Codes Administration, in the issuance of permits, and the planning commission, in the preparation and approval of land-use plans, shall co-ordinate work in conjunction with the Metropolitan Health Department through the provisions of this chapter and the rules and regulations adopted by the Board so as to achieve and maintain such levels of air quality as will protect human health and safety and, to the greatest degree practical, prevent injury to plant life and property, foster the comfort and convenience of inhabitants of the Metropolitan Government area and promote the economic and social development of the Metropolitan Government area.

(2.0) Section 4-1-27. Severability

The provisions of any part, section, subsection, paragraph, phrase or clause of this chapter that shall be adjudged invalid or unconstitutional by any court of competent jurisdiction, the judgment shall not affect, compare, or invalidate the remainder of this chapter, but should be confined in its operation to the part, section, subsection, paragraph, phrase or clause of this chapter that shall not be directly involved in the controversy in which such judgment shall have been redeemed.

FEDERALLY PROMULGATED REGULATIONS

(6.0) 52.2223 Compliance Schedules

(e) Federal compliance schedules—Local programs.

(1) Except as provided in subparagraph (16) of this paragraph, the owner or operator of any stationary source subject to the following emission limiting regulations of the Knox County Air Pollution Control Regulations and the City of Memphis Air Pollution Control Code and Shelby County Air Pollution Control Code contained as part of the Tennessee implementation plan shall comply with the compliance schedule in subparagraph (2) of this paragraph: Knox County Air Pollution Control Requlations, Sections 18.2C; 19.4B; 20.1D; and 23.1; City of Memphis Air Pollution Control Code and Shelby County Air Pollution Control Code Section 3-24(d).

(2) Compliance schedule.

(i) October 1, 1973—Submit to the Administrator a final control plan, which describes at a minimum the steps which will be taken by the source to achieve compliance with the applicable regulations.

(ii) December 1, 1973—Negotiate and sign all necessary contracts for emission control systems or process modifications, or issue orders for the purchase of component parts to accomplish emission control or process modification.

(iii) January 1, 1974—Initiate onsite construction or installation of emission control equipment or process modification.

(iv) May 1, 1975—Complete onsite construction or installation of emission control equipment or process modification.

(v) July 1, 1975—Achieve compliance with applicable regulations and certify such compliance to the Administrator.

(3) Except as provided in subparagraph (16) of this paragraph, the owner or operator of any stationary source subject to the following emission limiting regulations of the Knox County Air Pollution Control Regulations contained as part of the Tennessee implementation plan shall comply with the compliance schedule in subparagraph (4) of this paragraph: Knox County Air Pollution Regulation, Section 19.2C.

(4) Compliance schedule.

(i) October 1, 1973—Submit to the Administrator a final control plan, which describes at a minimum the steps which will be taken by the source to achieve compliance with the applicable regulations.

(ii) December 1, 1973—Negotiate and sign all necessary contracts for emission control systems or process modifications, or issue orders for the purchase of component parts to accomplish emission control or process modification.

(iii) January 1, 1974—Initiate onsite construction or installation of emission control equipment or process modification.

(iv) May 1, 1975—Complete onsite construction or installation of emission control equipment or process modification.

(v) June 1, 1975—Achieve compliance with the applicable regulations, and certify such compliance to the Administrator.

(5) Except as provided in subparagraph (16) of this paragraph, the owner or operator of any boiler or furnace of more than 250 million BTU per hour heat input subject to the requirements of Knox County Air Pollution Control Regulations, Section 18.4B; and City of Memphis Air Pollution Control Code and Shelby County Air Pollution Control Code, Section 3-24(b), contained as part of the Tennessee implementation plan shall notify the Administrator no later than October 1, 1973, of his intent to utilize either low-sulfur fuel or stack gas desulfurization to meet these requirements.

(6) Any owner or operator of a stationary source subject to subparagraph (5) of this paragraph who elects to utilize low-sulfur fuel shall be subject to the following compliance schedule:

(i) November 1, 1973—Submit to the Administrator a projection of the amount of fuel, by types, that will be substantially adequate to enable compliance with the applicable regulation on July 1, 1975, and for at least one year thereafter.

(ii) December 31, 1973—Sign contracts with fuel suppliers for fuel requirements as projected above.

(iii) January 31, 1974—Submit a statement as to whether boiler modifications will be required. If modifications will be required, submit plans for such modifications.

(iv) March 15, 1975—Let contracts for necessary boiler modifications, if applicable.

(v) June 15, 1975—Initiate onsite modifications, if applicable.

(vi) March 31, 1975—Complete onsite modifications, if applicable.

(vii) July 1, 1975—Achieve compliance with the requirements of Knox County Air Pollution Control Regulations, Section 18.4B, and City of Memphis Air Pollution Control Code and Shelby County Air Pollution Control Code, Section 3-24(b) and certify such compliance to the Administrator.

(7) Any owner or operator of a stationary source subject to subparagraph (5) of this paragraph who elects to utilize stack gas desulfurization shall be subject to the following compliance schedule:

(i) November 1, 1973—Submit to the Administrator a final control plan, which describes at a minimum the steps which will be taken by the source to achieve compliance with the applicable regulation.

(ii) January 1, 1974—Negotiate and sign all necessary contracts for emission control systems or process modification, or issue orders for the purchase of component parts to accomplish emission control or process modification.

(iii) February 1, 1974—Initiate onsite construction or installation of emission control equipment or process modification.

(iv) May 1, 1975—Complete onsite construction or installation of emission control equipment or process modification.

(v) July 1, 1975—Achieve compliance with the applicable regulation and certify such compliance to the Administrator.

(8) Except as provided in subparagraph (16) of this paragraph, the owner or operator of any stationary source subject to the following emission limiting regulation of the Hamilton County Air Pollution Control Regulations contained as part of the Tennessee implementation plan shall comply with the compliance schedule in subparagraph (9) of this paragraph: Hamilton County Air Pollution Control Regulations, rule 10, (particulate emissions from process operations).

(9) Compliance schedule.

(i) September 15, 1973—Submit to the Administrator a final control plan, which describes at a minimum the steps which will be taken by the source to achieve compliance with the applicable regulations.

(ii) November 1, 1973—Negotiate and sign all necessary contracts for emission control systems or process modifications, or issue orders for the purchase of component parts to accomplish emission control or process modification.

(iii) December 1, 1973—Initiate onsite construction or installation of emission control equipment or process modification.

(iv) June 1, 1974—Complete onsite construction or installation or emission control equipment or process modification.

(v) July 1, 1974—Achieve compliance with the applicable regulations, and certify such compliance to the Administrator.

(10) Except as provided in subparagraph (16) of this paragraph, the owner or operator of any process (non-fuel burning) source of sulfur dioxide subject to the emission limiting requirements of the Hamilton County Air Pollution Control Regulations, rule 13, contained as part of the Tennessee implementation schedule in subparagraph (9) of this paragraph.

(11) Except as provided in subparagraph (16) of this paragraph, the owner or operator of any boiler or furnace of more than 250 million BTU per hour heat input subject to the sulfur dioxide emission limiting requirements of the Hamilton County Air Pollution Control Requlations, rule 13, contained as part of the Tennessee implementation plan shall notify the Administrator, no later than October 1, 1973, of his intent to utilize either low-sulfur fuel or stack gas desulfurization to meet these reguirements.

(12) Any owner or operator of a fuel burning facility subject to the following compliance schedule:

(i) November 1, 1973—Submit to the Administrator a projection of the amount of fuel, by types, that will be substantially adequate to enable compliance with the applicable regulation on July 1, 1974, and for at least one year thereafter.

(ii) December 1, 1973—Sign contracts with fuel suppliers for fuel requirements as projected above.

(iii) January 1, 1974—Submit a statement as to whether boiler modifications will be required. If modifications will be required, submit plans for such modifications.

(iv) February 1, 1974—Let contracts for necessary boiler modifications, if applicable.

(v) February 15, 1974—Initiate onsite modifications, if applicable.

(vi) June 15, 1974—Complete onsite modifications, if applicable.

(vii) July 1, 1974—Achieve compliance with the requirements of Hamilton County Air Pollution Control Regulations, rule 13, and certify such compliance to the Administrator.

(13) Any owner or operator of a fule burning facility subject to subparagraph (11) of this paragraph who elects to utilize stack gas desulfurization shall be subject to the following compliance schedule:

(i) November 1, 1973—Submit to the Administrator a final control plan, which describes at a minimum the steps which will be taken by the source to achieve compliance with the applicable regulations.

(ii) December 1, 1973—Negotiate and sign all necessary contracts for emission control systems or process modifications, or issue orders for the purchase of component parts to accomplish emission control or process modification.

(iii) December 15, 1973—Initiate onsite construction or installation of emission control equipment or process modification.

(iv) June 15, 1974—Complete onsite construction or installation of emission control equipment or process modification.

(v) July 1, 1974—Achieve compliance with the applicable regulations, and certify such compliance to the Administrator.

(14) If a performance test is necessary for a determination as to whether compliance has been achieved, such a test must be completed by the final compliance date in the applicable regulation. Ten days prior to such a test, notice must be given to the Administrator to afford him the opportunity to have an observer present.

(15) Any owner or operator subject to compliance schedule above shall certify to the Administrator, within five days after the deadline for each increment of progress in that schedule, whether or not the increment has been met.

(16) (i) None of the above subparagraphs shall apply to a source which is presently in compliance with applicable regulations and which has certified such compliance to the Administrator by October 1, 1973. The Administrator may request whatever supporting information he considers necessary for proper certification.

(ii) Any compliance schedule adopted by the State and approved by the Administrator shall satisfy the requirements of this paragraph for the affected source.

(iii) Any owner or operator subject to a compliance schedule in this paragraph may submit to the Administrator no later than October 1, 1973, a proposed alternative compliance schedule.

No such compliance schedule may provide for final compliance after the final compliance date in the applicable compliance schedule of this paragraph. If promulgated by the Administrator, such schedule shall satisfy the requirements of this paragraph for the affected source.

(17) No compliance schedule in this paragraph shall excuse a source from complying with an interim emission limitation that is applicable to such source.

(18) Nothing in this paragraph shall preclude the Administrator from promulgating a separate schedule for any source to which the application of a compliance schedule in this paragraph fails to satisfy the requirements of 51.15 (b) and (c) of this chapter.

(10.0) 52.2228 Review of New or Modified Indirect Sources

(b) Regulation for Review of New or Modified Indirect Sources

(1) All terms used in this paragraph but not specifically defined below shall have the meaning given them in 52.01 of this chapter.

(i) The term "indirect source" means a facility, building, structure, or installation which attracts or may attract mobile source activity that results in emissions of a pollutant for which there is a national standard. Such indirect sources include, but are not limited to:

(a) Highways and roads.

(b) Parking facilities.

(c) Retail, commercial and industrial facilities.

(d) Recreation, amusement, sports and entertainment facilities.

(e) Airports.

(f) Office and Government buildings.

(g) Apartment and condominium buildings.

(h) Education facilities.

(ii) The term "Administrator" means the Administrator of the Environmental Protection Agency or his designated agent.

(iii) The term "associated parking area" means a parking facility or facilities owned and/or operated in conjunction with an indirect source.

(iv) The term "aircraft operation" means an aircraft take-off or landing.

(v) The phrase "to commence construction" means to engage in a continuous program of on-site construction including site clearance, grading, dredging, or land filling specifically designed for an indirect source in preparation for the fabrication, erection, or installation of the building components of the indirect source. For the purpose of this paragraph, interruptions resulting from acts of God, strikes, litigation, or other matters beyond the control of the owner shall be disregarded in determining whether a construction or modification program is continuous.

(vi) The phrase "to commence modification" means to engage in a continuous program of on-site modification, including site clearance, grading, dredging, or land filling in preparation for specific modification of the indirect source.

(vii) The term "highway section" means the development proposal of a highway of substantial length between logical termini (major crossroads, population centers, major traffic generators, or similar major highway control elements) as normally included in a single location study or multi-year highway improvement program as set forth in 23 CFR 770.201 (38 FR 31677).

(viii) The term "highway project" means all or a portion of a highway section which would result in a specific construction contract.

(ix) The term "Standard Metropolitan Statistical Area (SMSA)" means such areas as designated by the U.S. Bureau of the Budget in the following publication: "Standard Metropolitan Statistical Area," issued in 1967, with subsequent amendments.

(2) The requirements of this paragraph are applicable to the following:

(i) In an SMSA:

(a) Any new parking facility or other new indirect source with an associated parking area, which has a new parking capacity of 1,000 cars or more; or

(b) Any modified parking facility, or any modification of an associated parking area, which increases parking capacity by 500 cars or more; or

(c) Any new highway project with an anticipated average annual daily traffic volume of 20,000 or more vehicles per day within ten years of construction; or

(d) Any modified highway project which will increase average annual daily traffic volume by 10,000 or more vehicles per day within ten years after modification.

(ii) Outside an SMSA:

(a) Any new parking facility, or other new indirect source with an associated parking area, which has a parking capacity of 2,000 cars or more; or

(b) Any modified parking facility, or any modification of an associated parking area, which increases parking capacity by 1,000 cars or more.

(iii) Any airport, the construction or general modification program of which is expected to result in the following activity within ten years of construction or modification:

(a) New airport: 50,000 or more operations per year by regularly scheduled air carriers, or use by 1,600,000 or more passengers per year.

(b) Modified airport: Increase of 50,000 or more operations per year by regularly scheduled air carriers over the existing volume of operations, or increase of 1,600,000 or more passengers per year.

(iv) Where an indirect source is constructed or modified in increments which individually are not subject to review under this paragraph, and which are not part of a program of construction or modification in planned incremental phases approved by the Administrator, all such increments commenced after December 31, 1974, or after the latest approval hereunder, whichever date is most recent, shall be added together for determining the applicability of this paragraph.

(3) No owner or operator of an indirect source subject to this paragraph shall commence construction or modification of such source after December 31, 1974, without first obtaining approval from the Administrator. Application for approval to construct or modify shall be by means prescribed by the Administrator, and shall include a copy of any draft or final environmental impact statement which has been prepared pursuant to the National Environmental Policy Act (42 U.S.C. 4321). If not included in such environmental impact statement, the Administrator may request the following information:

(i) For all indirect sources subject to this paragraph, other than highway projects:

(a) The name and address of the applicant.

(b) A map showing the location of the site of indirect source and the topography of the area.

(c) A description of the proposed use of the site, including the normal hours of operation of the facility, and the general types of activities to be operated therein.

(d) A site plan showing the location of associated parking areas, points of motor vehicle ingress and egress to and from the site and its associated parking areas, and the location and height of buildings on the site.

(e) An identification of the principal roads, highways, and intersections that will be used by motor vehicles moving to or from the indirect source.

(f) An estimate, as of the first year after the date the indirect source will be substantially complete and operational, of the average daily traffic volumes, maximum traffic volumes for one-hour and eight-hour periods, and vehicle capacities of the principal roads, highways, and intersections identified pursuant to subdivision (i) (e) of this subparagraph located within one-fourth mile of all boundaries of the site.

(g) Availability of existing and projected mass transit to service the site.

(h) Where approval is sought for indirect sources to be constructed in incremental phases, the information required by this subparagraph (3) shall be submitted for each phase of the construction project.

(i) Any additional information or documentation that the Administrator deems necessary to determine the air quality impact of the indirect source, including the submission of measured air quality data at the proposed site prior to construction or modification.

(ii) For airports:

(a) An estimate of the average number and maximum number of aircraft operations per day by type of aircraft during the first, fifth and tenth years after the date of expected completion.

(b) A description of the commercial, industrial, residential and other development that the applicant expects will occur within three miles of the perimeter of the airport within the first five and the first ten years after the date of expected completion.

(c) Expected passenger loadings at the airport.

(d) The information required under subdivisions (i) (a) through (i) of this subparagraph.

(iii) For highway projects:

(a) A description of the average and maximum traffic volumes for one, eight, and 24-hour time periods expected within 10 years of date of expected completion.

(b) An estimate of vehicle speeds for average and maximum traffic volume conditions and the vehicle capacity of the highway project.

(c) A map showing the location of the highway project, including the location of buildings along the right-of-way.

(d) A description of the general features of the highway project and associated right-of-way, including the approximate height of buildings adjacent to the highway.

(e) Any additional information or documentation that the Administrator deems necessary to determine the air quality impact of the indirect source, including the submission of measured air quality data at the proposed site prior to construction or modification.

(iv) For indirect sources other than airports and those highway projects subject to the provisions of paragraph (b) (6) (iii) of this section, the air quality monitoring requirements of paragraph (b) (3) (i) (i) of this section shall be limited to carbon monoxide, and shall be conducted for a period of not more than 14 days.

(4) (i) For indirect sources other than highway projects and airports, the Administrator shall not approve an application to construct or modify if he determines that the indirect source will:

(a) Cause a violation of the control strategy of any applicable state implementation plan; or

(b) Cause or exacerbate a violation of the national standards for carbon monoxide in any region or portion thereof.

(ii) The Administrator shall make the determination pursuant to paragraph (b) (4) (i) (b) of this section by evaluating the anticipated concentration of carbon monoxide at reasonable receptor or exposure sites which will be affected by the mobile source activity expected to be attracted by the indirect source. Such determination may be made by using traffic flow characteristic guidelines published by the Environmental Protection Agency which relate traffic demand and capacity considerations to ambient carbon monoxide impact, by use of appropriate atmospheric diffusion models (examples of which are referenced in Appendix O to Part 51 of this chapter), and/or by any other reliable analytic method. The applicant may (but need not) submit with his application, the results of an appropriate diffusion model and/or any other reliable analytic method, along with the technical data and information supporting such results. Any such results and supporting data submitted by the applicant shall be considered by the Administrator in making his determination pursuant to paragraph (b) (4) (i) (b) of this section.

(5) (i) For airports subject to this paragraph, the Administrator shall base his decision on the approval or disapproval of an application on the considerations to be published as an Appendix to this Part.

(ii) For highway projects and parking facilities specified under paragraph (b) (2) of this section which are associated with airports, the requirements and procedures specified in paragraphs (b) (4) and (6) (i) and (ii) of this section shall be met.

(6) (i) For all highway projects subject to this paragraph, the Administrator shall not approve an application to construct or modify if he determines that the indirect source will:

(a) Cause a violation of the control strategy of any applicable state implementation plan; or

(b) Cause or exacerbate a violation of the national standards for carbon monoxide in any region or portion thereof.

(ii) The determination pursuant to paragraph (b) (6) (i) (b) of this section shall be made by evaluating the anticipated concentration of carbon monoxide at reasonable receptor or exposure sites which will be affected by the mobile source activity expected on the highway for the ten year period following the expected date of completion according to the procedures specified in paragraph (b) (4) (ii) of this section.

(iii) For new highway projects subject to this paragraph with an anticipated average daily traffic volume of 50,000 or more vehicles within ten years of construction, or modifications to highway projects subject to this paragraph which will increase average daily traffic volume by 25,000 or more vehicles within ten years after modification, the Administrator's decision on the approval or disapproval of an application shall be based on the considerations to be published as an Appendix to this Part in addition to the requirements of paragraph (b) (6) (i) of this section.

(7) The determination of the air quality impact of a proposed indirect source "at reasonable receptor or exposure sites", shall mean such locations where people might reasonably be exposed for time periods consistent with the national ambient air quality standards for the pollutants specified for analysis pursuant to this paragraph.

(8) (i) Within 20 days after receipt of an application or addition thereto, the Administrator shall advise the owner or operator of any deficiency in the information submitted in support of the application. In the event of such a deficiency, the date of receipt of the application for the purpose of paragraph (b) (8) (ii) of this section shall be the date on which all required information is received by the Administrator.

(ii) Within 30 days after receipt of a complete application, the Administrator shall:

(a) Make a preliminary determination whether the indirect source should be approved, approved with conditions in accordance with paragraphs (b) (9) or (10) of this section, or disapproved.

(b) Make available in at least one location in each region in which the proposed indirect source would be constructed, a copy of all materials submitted by the owner or operator, a copy of the Administrator's preliminary determination, and a copy or summary of other materials, if any, considered by the Administrator in making his preliminary determination; and

(c) Notify the public, by prominent advertisement in a newspaper of general circulation in each region in which the proposed indirect source would be constructed, of the opportunity for written public comment on the information submitted by the owner or operator and the Administrator's preliminary determination on the approvability of the indirect source.

(iii) A copy of the notice required pursuant to this subparagraph shall be sent to the applicant and to officials and agencies having cognizance over the location where the indirect source will be situated, as follows: State and local air pollution control agencies, the chief executive of the city and county; any comprehensive regional land use planning agency; and for highways, any local board or committee charged with responsibility for activities in the conduct of the urban transportation planning process (3-C process) pursuant to 23 U.S.C. 134.

(iv) Public comments submitted in writing within 30 days after the date such information is made available shall be considered by the Administrator in making his final decision on the application. No later than 10 days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The Administrator shall consider the applicant's response in making his final decision. All comments shall be made available for public inspection in at least one location in the region in which the indirect source would be located.

(v) The Administrator shall take final action on an application within 30 days after the close of the public comment period. The Administrator shall notify the applicant in writing of his approval, conditional approval, or denial of the application, and shall set forth his reasons for conditional approval or denial. Such notification shall be made available for public inspection in at least one location in the region in which the indirect source would be located.

(vi) The Administrator may extend each of the time periods specified in paragraphs (b) (8) (ii), (iv), or (v) of this section by no more than 30 days, or such other period as agreed to by the applicant and the Administrator.

(9) (i) Whenever an indirect source as proposed by an owner or operator's application would not be permitted to be constructed for failure to meet the tests set forth pursuant to paragraphs (b) (4) (i), (b) (5) (i), or (b) (6) (i) and (iii) of this section, the Administrator may impose reasonable conditions on an approval related to the air quality aspects of the proposed indirect source so that such source, if constructed or modified in accordance with such conditions, could meet the tests set forth pursuant to paragraphs (b) (4) (i), (b) (5) (i), or (b) (6) (i) and (iii) of this section. Such conditions may include, but not be limited to:

(a) Binding commitments to roadway improvements or additional mass transit facilities to serve the indirect source secured by the owner or operator from governmental agencies having jurisdiction thereof;

(b) Binding commitments by the owner or operator to specific programs for mass transit incentives for employees and patrons of the source; and

(c) Binding commitments by the owner or operator to construct, modify, or operate the indirect source in such a manner as may be necessary to achieve the traffic flow characteristics published by the Environmental Protection Agency pursuant to paragraph (b) (4) (ii) of this section.

(ii) The Administrator may specify that any items of information provided in an application for approval related to the operation of an indirect source which may affect the source's air quality impact shall be considered permit conditions.

(10) Notwithstanding the provisions relating to modified indirect sources contained in paragraph (b) (2) of this section, the Administrator may condition any approval by reducing the extent to which the indirect source may be further modified without resubmission for approval under this paragraph.

(11) Any owner or operator who fails to construct an indirect source in accordance with the application as approved by the Administrator; any owner or operator who fails to construct and operate an indirect source in accordance with conditions imposed by the Administrator under paragraph (b) (9) of this section; any owner or operator who modifies an indirect source in violation of conditions imposed by the Administrator under paragraph (b) (10) of this section; or any owner or operator of an indirect source subject to this paragraph who commences construction or modification thereof after December 31, 1974, without applying for and receiving approval hereunder, shall be subject to the penalties specified under section 113 of the Act and shall be considered in violation of an emission standard or limitation under section 304 of the Act. Subsequent modification to an approved indirect source may be made without applying for permission pursuant to this paragraph only where such modification would not violate any condition imposed pursuant to paragraphs (b) (9) and (10) of this section and would not be subject to the modification criteria set forth in paragraph (b) (2) of this section.

(12) Approval to construct or modify shall become invalid if construction or modification is not commenced within 24 months after receipt of such approval. The Administrator may extend such time period upon satisfactory showing that an extension is justified. The applicant may apply for such an extension at the time of initial application or at any time thereafter.

(13) Approval to construct or modify shall not relieve any owner or operator of the responsibility to comply with the control strategy and all local, State and Federal regulations which are part of the applicable State implementation plan.

(14) Where the Administrator delegates the responsibility for implementing the procedures for conducting indirect source review pursuant to this paragraph to any agency, other than a regional office of the Environmental Protection Agency, the following provisions shall apply:

(i) Where the agency designated is not an air pollution control agency, such agency shall consult the appropriate State or local air pollution control agency prior to making any determination required by paragraphs (b) (4), (5), or (6) of this section. Similarly, where the agency designated does not have continuing responsibilities for land use planning, such agency shall consult with the appropriate State or local land use and transportation planning agency prior to making any determination required by paragraph (b) (9) of this section.

(ii) The Administrator of the Environmental Protection Agency shall conduct the indirect source review pursuant to this paragraph for any indirect source owned or operated by the United States Government.

(iii) A copy of the notice required pursuant to paragraph (b) (8) (ii) (c) of this section shall be sent to the Administrator through the appropriate Regional Office.

(15) In any area in which a "management of parking supply" regulation which has been promulgated by the Administrator is in effect, indirect sources which are subject to review under the terms of such a regulation shall not be required to seek review under this paragraph but instead shall be required to seek review pursuant to such management of parking supply regulation. For purposes of this paragraph, a "management of parking supply" regulation shall be any regulation promulgated by the Administrator as part of a transportation control plan pursuant to the Clean Air Act which requires that any new or modified facility containing a given number of parking spaces shall receive a permit or other prior approval, issuance of which is to be conditioned on air quality considerations.

(16) Notwithstanding any of the foregoing provisions to the contrary, the operation of this paragraph is hereby suspended pending further notice. No facility which commences construction prior to the expiration of the sixth month after the operation of this paragraph is reinstated (as to that type of facility) shall be subject to this paragraph.

(37 FR 10846, May 31, 1972 as amended at 40 FR 28065, July 3, 1975; 40 FR 40160, Sept. 2, 1975)

(17.0) 52.2232 Prevention of Significant Deterioration

(b) Definitions. For the purposes of this section:

(1) "Facility" means an identifiable piece of process equipment. A stationary source is composed of one or more pollutant-emitting facilities.

(2) The phrase "Administrator" means the Administrator of the Environmental Protection Agency or his designated representative.

(3) The phrase "Federal Land Manager" means the head, or his designated representative, of any Department or Agency of the Federal Government which administers federally-owned land, including public domain lands.

(4) The phrase "Indian Reservation" means any federally-recognized reservation established by Treaty, Agreement, Executive Order, or Act of Congress.

(5) The phrase "Indian Governing Body" means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

(6) "Construction" means fabrication, erection or installation of a stationary source.

(7) "Commenced" means that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

(c) Area designation and deterioration increment

(1) The provisions of this paragraph have been incorporated by reference into the applicable implementation plans for various States, as provided in Subparts B through DDD of this part. Where this paragraph is so incorporated, the provisions shall also be applicable to all lands owned by the Federal Government and Indian Reservations located in such State. The provisions of this paragraph do not apply in those counties or other functionally equivalent areas that pervasively exceeded any national ambient air quality standards during 1974 for sulfur dioxide or particulate matter and then only with respect to such pollutants. States may notify the Administrator at any time of those areas which exceeded the national standards during 1974 and therefore are exempt from the requirements of this paragraph.

(2) (i) For purposes of this paragraph, areas designated as Class I or II shall be limited to the following increases in pollutant concentration occurring since January 1, 1975:

Area Designations

Pollutant	Class I (ug/m^3)	Class II (ug/m^3)
Particulate matter:		
Annual geometric mean	5	10
24-hr maximum	10	30
Sulfur dioxide:		
Annual arithmetic mean	2	15
24-hr maximum	5	100
3-hr maximum	25	700

(ii) For purposes of this paragraph, areas designated as Class III shall be limited to concentrations of particulate matter and sulfur dioxide no greater than the national ambient air quality standards.

(iii) The air quality impact of sources granted approval to construct or modify prior to January 1, 1975 (pursuant to the approved new source review procedures in the plan) but not yet operating prior to January 1, 1975, shall not be counted against the air quality increments specified in paragraph (c) (2) (i) of this section.

(3) (i) All areas are designated Class II as of the effective date of this paragraph. Redesignation may be proposed by the respective States, Federal Land Manager, or Indian Governing Bodies, as provided below, subject to approval by the Administrator.

(ii) The State may submit to the Administrator a proposal to redesignate areas of the State Class I, Class II, or Class III, provided that:

(a) At least one public hearing is held in or near the area affected and this public hearing is held in accordance with procedures established in 51.4 of this chapter, and

(b) Other States, Indian Governing Bodies, and Federal Land Managers whose lands may be affected by the proposed redesignation are notified at least 30 days prior to the public hearing, and

(c) A discussion of the reasons for the proposed redesignation is available for public inspection at least 30 days prior to the hearing and the notice announcing the hearing contains appropriate notification of the availability of such discussion, and

(d) The proposed redesignation is based on the record of the State's hearing, which must reflect the basis for the proposed redesignation, including consideration of (1) growth anticipated in the area, (2) the social, environmental, and economic effects of such redesignation upon the area being proposed for redesignation and upon other areas and States, and (3) any impacts of such proposed redesignation upon regional or national interests.

(e) The redesignation is proposed after consultation with the elected leadership of local and other substate general purpose governments in the area covered by the proposed redesignation.

(iii) Except as provided in paragraph (c) (3) (iv) of this section, a State in which lands owned by the Federal Government are located may submit to the Administrator a proposal to redesignate such lands Class I, Class II, or Class III in accordance with subdivision (ii) of this subparagraph provided that:

(a) The redesignation is consistent with adjacent State and privately owned land, and

(b) Such redesignation is proposed after consultation with the Federal Land Manager.

(iv) Notwithstanding subdivision (iii) of this subparagraph, the Federal Land Manager may submit to the Administrator a proposal to redesignate any Federal lands to a more restrictive designation than would otherwise be applicable provided that:

(a) The Federal Land Manager follows procedures equivalent to those required of States under paragraph (c) (3) (ii) and,

(b) Such redesignation is proposed after consultation with the State(s) in which the Federal Land is located or which border the Federal Land.

(v) Nothing in this section is intended to convey authority to the States over Indian Reservations where States have not assumed such authority under other laws nor is it intended to deny jurisdiction which States have assumed under other laws. Where a State has not assumed jurisdiction over an Indian Reservation the appropriate Indian Governing Body may submit to the Administrator a proposal to redesignate areas Class I, Class II, or Class III, provided that:

(a) The Indian Governing Body follows procedures equivalent to those required of States under paragraph (c) (3) (ii) and,

(b) Such redesignation is proposed after consultation with the State(s) in which the Indian Reservation is located or which border the Indian Reservation and, for those lands held in trust, with the approval of the Secretary of the Interior.

(vi) The Administrator shall approve, within 90 days, any redesignation proposed pursuant to this subparagraph as follows:

(a) Any redesignation proposed pursuant to subdivisions (ii) and (iii) of this subparagraph shall be approved unless the Administrator determines (1) that the requirements of subdivisions (ii) and (iii) of this subparagraph have not been complied with, (2) that the State has arbitrarily and capriciously disregarded relevant considerations set forth in subparagraph (3) (ii) (d) of this paragraph, or (3) that the State has not requested and received delegation of responsibility for carrying out the new source review requirements of paragraphs (d) and (e) of this section.

(b) Any redesignation proposed pursuant to subdivision (iv) of this subparagraph shall be approved unless he determines (1) that the requirements of subdivision (iv) of this subparagraph have not been complied with, or (2) that the Federal Land Manager has arbitrarily and capriciously disregarded relevant considerations set forth in subparagraph (3) (ii) (d) of this paragraph.

(c) Any redesignation submitted pursuant to subdivision (v) of this subparagraph shall be approved unless he determines (1) that the requirements of subdivision (v) of this subparagraph have not been complied with, or (2) that the Indian Governing Body has arbitrarily and capriciously disregarded relevant considerations set forth in subparagraph (3) (ii) (d) of this paragraph.

(d) Any redesignation proposed pursuant to this paragraph shall be approved only after the Administrator has solicited written comments from affected Federal agencies and Indian Governing Bodies and from the public on the proposal.

(e) Any proposed redesignation protested to the proposing State, Indian Governing Body, or Federal Land Manager and to the Administrator by another State or Indian Governing Body because of the effects upon such protesting State or Indian Reservation shall be approved by the Administrator only if he determines that in his judgment the redesignation appropriately balances considerations of growth anticipated in the area proposed to be redesignated; the social, environmental and economic effects of such redesignation upon the area being redesignated and upon other areas and States; and any impacts upon regional or national interests.

(f) The requirements of paragraph (c) (3) (vi) (a) (3) that a State request and receive delegation of the new source review requirements of this section as a condition to approval of a proposed redesignation, shall include as a minimum receiving the administrative and technical functions of the new source review. The Administrator will carry out any required enforcement action in cases where the State does not have adequate legal authority to initiate such actions. The Administrator may waive the requirements of paragraph (c) (3) (vi) (a) (3) if the State Attorney-General has determined that the State cannot accept delegation of the administrative/technical functions.

(vii) If the Administrator disapproves any proposed area designation under this subparagraph, the State, Federal Land Manager or Indian Governing Body, as appropriate, may resubmit the proposal after correcting the deficiencies noted by the Administrator or reconsidering any area designation determined by the Administrator to be arbitrary and capricious.

(d) Review of new sources

(1) The provisions of this paragraph have been incorporated by reference into the applicable implementation plans for various States, as provided in Subparts B through DDD of this part. Where this paragraph is so incorporated, the requirements of this paragraph apply to any new or modified stationary source of the type identified below which has not commenced construction or modification prior to June 1, 1975 except as specifically provided below. A

source which is modified, but does not increase the amount of sulfur oxides or particulate matter emitted, or is modified to utilize an alternative fuel, or higher sulfur content fuel, shall not be subject to this paragraph.

(i) Fossil-Fuel Steam Electric Plants of more than 1000 million B.T.U. per hour heat input.

(ii) Coal Cleaning Plants.

(iii) Kraft Pulp Mills.

(iv) Portland Cement Plants.

(v) Primary Zinc Smelters.

(vi) Iron and Steel Mills.

(vii) Primary Aluminum Ore Reduction Plants.

(viii) Primary Copper Smelters.

(ix) Municipal Incinerators capable of charging more than 250 tons of refuse per 24 hour day.

(x) Sulfuric Acid Plants.

(xi) Petroleum Refineries.

(xii) Lime Plants.

(xiii) Phosphate Rock Processing Plants.

(xiv) By-Product Coke Oven Batteries.

(xv) Sulfur Recovery Plants.

(xvi) Carbon Black Plants (furnace process).

(xvii) Primary Lead Smelters.

(xviii) Fuel Conversion Plants.

(xix) Ferroalloy production facilities commencing construction after October 5, 1975.

(2) No owner or operator shall commence construction or modification of a source subject to this paragraph unless the Administrator determines that, on the basis of information submitted pursuant to subparagraph (3) of this paragraph:

(i) The effect on air quality concentration of the source or modified source, in conjunction with the effects of growth and reduction in emissions after January 1, 1975, of other sources in the area affected by the proposed source, will not violate the air quality increments applicable in the area where the source will be located nor the air quality increments applicable in any other areas. The analysis of emissions growth and reduction after January 1, 1975, of other sources in the areas affected by the proposed source shall include all new and modified sources granted approval to construct pursuant to this paragraph; reduction in emissions from existing sources which contributed to air quality during all or part of 1974; and general commercial, residential, industrial, and other sources of emissions growth not exempted by paragraph (c) (2) (111) of this section which has occurred since January 1, 1975.

(ii) The new or modified source will meet an emission limit, to be specified by the Administrator as a condition to approval, which represents that level of emission reduction which would be achieved by the application of best available control technology, as defined in 52.01 (f), for particulate matter and sulfur dioxide. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular class of sources would make the imposition of an emission standard infeasible, he may instead prescribe a design or equipment standard requiring the application of best available control technology. Such standard shall to the degree possible set forth the emission reductions achievable by implementation of such design or equipment, and shall provide for compliance by means which achieve equivalent results.

(iii) With respect to modified sources, the requirements of subparagraph (2) (ii) of this paragraph shall be applicable only to the facility or facilities from which emissions are increased.

(3) In making the determinations required by paragraph (d) (2) of this section, the Administrator shall, as a minimum, require the owner or operator of the source subject to this paragraph to submit: site information, plans, description, specifications, and drawings showing the design of the source; information necessary to determine the impact that the construction or modification will have on sulfur dioxide and particulate matter air quality levels; and any other information necessary to determine that best available control technology will be applied. Upon request of the Administrator, the owner or operator of the source shall provide information on the nature and extent of general commercial, residential, industrial, and other growth which has occurred in the area affected by the source's emissions (such area to be specified by the

Administrator) since January 1, 1975.

(4) (i) Where a new or modified source is located on Federal Lands, such source shall be subject to the procedures set forth in paragraphs (d) and (e) of this section. Such procedures shall be in addition to applicable procedures conducted by the Federal Land Manager for administration and protection of the affected Federal Lands. Where feasible, the Administrator will coordinate his review and hearings with the Federal Land Manager to avoid duplicate administrative procedures.

(ii) New or modified sources which are located on Indian Reservations shall be subject to procedures set forth in paragraphs (d) and (e) of this section. Such procedures shall be administered by the Administrator in cooperation with the Secretary of the Interior with respect to lands over which the State has not assumed jurisdiction under other laws.

(iii) Whenever any new or modified source is subject to action by a Federal Agency which might necessitate preparation of an environmental impact statement pursuant to the National Environmental Policy Act (42 U.S.C. 4321), review by the Administrator conducted pursuant to this paragraph shall be coordinated with the broad environmental reviews under that Act, to the maximum extent feasible and reasonable.

(5) Where an owner or operator has applied for permission to construct or modify pursuant to this paragraph and the proposed source would be located in an area which has been proposed for redesignation to a more stringent class (or the State, Indian Governing Body, or Federal Land Manager has announced such consideration), approval shall not be granted until the Administrator has acted on the proposed redesignation.

(e) Procedures for public participation

(1) (i) Within 20 days after receipt of an application to construct, or any addition to such application, the Administrator shall advise the owner or operator of any deficiency in the information submitted in support of the application. In the event of such a deficiency, the date of receipt of the application for the purpose of paragraph (e) (1) (ii) of this section shall be the date on which all required information is received by the Administrator.

(ii) Within 30 days after receipt of a complete application, the Administrator shall:

(a) Make a preliminary determination whether the source should be approved, approved with conditions, or disapproved.

(b) Make available in at least one location in each region in which the proposed source would be constructed, a copy of all materials submitted by the owner or operator, a copy of the Administrator's preliminary determination and a copy or summary of other materials, if any, considered by the Administrator in making his preliminary determination; and

(c) Notify the public, by prominent advertisement in newspaper of general circulation in each region in which the proposed source would be constructed, of the opportunity for written public comment on the information submitted by the owner or operator and the Administrator's preliminary determination on the approvability of the source.

(iii) A copy of the notice required pursuant to this subparagraph shall be sent to the applicant and to officials and agencies having cognizance over the locations where the source will be situated as follows: State and local air pollution control agencies, the chief executive of the city and county; any comprehensive regional land use planning agency; and any State, Federal Land Manager or Indian Governing Body whose lands will be significantly affected by the source's emissions.

(iv) Public comments submitted in writing within 30 days after the date such information is made available shall be considered by the Administrator in making his final decision on the application. No later than 10 days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The Administrator shall consider the applicant's response in making his final decision. All comments shall be made available for public inspection in at least one location in the region in which the source would be located.

(v) The Administrator shall take final action on an application within 30 days after the close of the public comment period. The Administrator shall notify the applicant in writing of his approval, conditional approval, or denial of the application, and shall set forth his reasons for conditional approval or denial. Such notification shall be made available for public inspection in at least one location in the region in which the source would be located.

(vi) The Administrator may extend each of the time periods specified in paragraph (e) (1) (ii), (iv), or (v) of this section by no more than 30 days or such other period as agreed to by the applicant and the Administrator.

(2) Any owner or operator who constructs, modifies, or operates a stationary source not in accordance with the application, as approved and conditioned by the Administrator, or any owner or operator of a stationary source subject to this paragraph who commences construction or modification after June 1, 1975, without applying for and receiving approval hereunder, shall be subject to enforcement action under section 113 of the Act.

(3) Approval to construct or modify shall become invalid if construction or expansion is not commenced within 18 months after receipt of such approval or if construction is discontinued for a period of 18 months or more. The Administrator may extend such time period upon a satisfactory showing that an extension is justified.

(4) Approval to construct or modify shall not relieve any owner or operator of the responsibility to comply with the control strategy and all local, State, and Federal regulations which are part of the applicable State Implementation Plan.

(f) Delegation of authority

(1) The Administrator shall have the authority to delegate responsibility for implementing the procedures for conducting source review pursuant to paragraphs (d) and (e), in accordance with subparagraphs (2), (3), and (4) of this paragraph.

(2) Where the Administrator delegates the responsibility for implementing the procedures for conducting source review pursuant to this section to any Agency, other than a regional office of the Environmental Protection Agency, the following provisions shall apply:

(i) Where the agency designated is not an air pollution control agency, such agency shall consult with the appropriate State and local air pollution control agency prior to making any determination required by paragraph (d) of this section. Similarly, where the agency designated does not have continuing responsibilities for managing land use, such agency shall consult with the appropriate State and local agency which is primarily responsible for managing land use prior to making any determination required by paragraph (d) of this section.

(ii) A copy of the notice pursuant to paragraph (e) (1) (ii) (c) of this section shall be sent to the Administrator through the appropriate regional office.

(3) In accordance with Executive Order 11752, the Administrator's authority for implementing the procedures for conducting source review pursuant to this section shall not be delegated, other than to a regional office of the Environmental Protection Agency, for new or modified sources which are owned or operated by the Federal government or for new or modified sources located on Federal lands; except that, with respect to the latter category, where new or modified sources are constructed or operated on Federal lands pursuant to leasing or other Federal agreements, the Federal land Manager may at his discretion, to the extent permissible under applicable statutes and regulations, require the lessee or permittee to be subject to a designated State or local agency's procedures developed pursuant to paragraphs (d) and (e) of this section.

(4) The Administrator's authority for implementing the procedures for conducting source review pursuant to this section shall not be redelegated, other than to a regional office of the Environmental Protection Agency, for new or modified sources which are located on Indian reservations except where the State has assumed jurisdiction over such land under other laws, in which case the Administrator may delegate his authority to the States in accordance with subparagraphs (2), (3), and (4) of this paragraph.

(39 FR 42514, Dec. 5, 1974; 40 FR 2802, Jan. 16, 1975, as amended at 40 FR 24535, June 9, 1975; 40 FR 25005, June 12, 2975; 40 FR 42012, Sept. 10, 1975)